

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



Entered at the Post Office at Chicago, Ill., for transmission through the mails at second-class rates.

A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. XV.

CHICAGO, ILLINOIS, DECEMBER 15, 1896.

No. 6.

ONE DOLLAR PER ANNUM.
SINGLE COPY, TEN CENTS.

Excelsior Grain-Cleaning Machinery

CONSISTING OF THE

EXCELSIOR Dustless Warehouse and Elevator Separator,
EXCELSIOR Oat Clipper, EXCELSIOR Separator and Grader,
EXCELSIOR "Combined Grain Machine."

ALSO

PEASE DUSTLESS SEPARATORS and WAREHOUSE FANNING MILLS,
POWER CAR PULLERS, GASOLINE ENGINES, STEAM ENGINES, HORSE POWERS
POWER TRANSMISSION MACHINERY,
GENERAL MILL AND ELEVATOR SUPPLIES.

E. H. PEASE MFG. CO., RACINE, WISCONSIN.

Headquarters for
SHAFTING, HANGERS, PULLEYS,
GEARS, SPROCKET WHEELS,
"Sweep" and "Tread" Horse Powers,
Elevator "Boots," "Heads," "Buckets,"
FEED GRINDERS,
Special Flax Mills; Single, Double and
Quadruple Flax Reels.
..... BELTING
"Platform," "Hopper" and "Dump"
Scales, Flexible Loading Spouts.
Corn Shellers, all kinds of FITTINGS,
SUPPLIES and MACHINERY for
Elevators and Mills.
Elevator Equipments a Specialty.

ADDRESS

GALDWELL
CONVEYOR
HORSE POWERS
WIRE ROPE
BELT TIGHTENERS

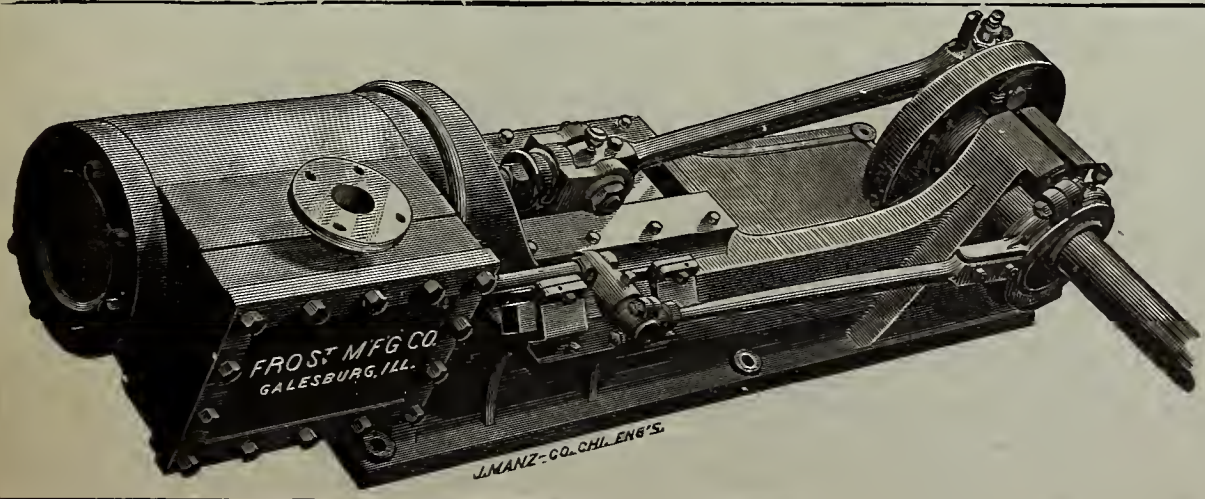
MILL AND ELEVATOR MACHINERY
ELEVATOR BOOTS
ELEVATOR BUCKETS
ELEVATOR BOLTS
BELTING AND ROPE TRANSMISSION
SHEAVE WHEELS
SHAFTING, HANGERS
SPROCKET WHEELS



SEND FOR CATALOGUE

THORNBURGH-
CREEL CO.,

245-247 S. Jefferson St.,
CHICAGO, ILL.



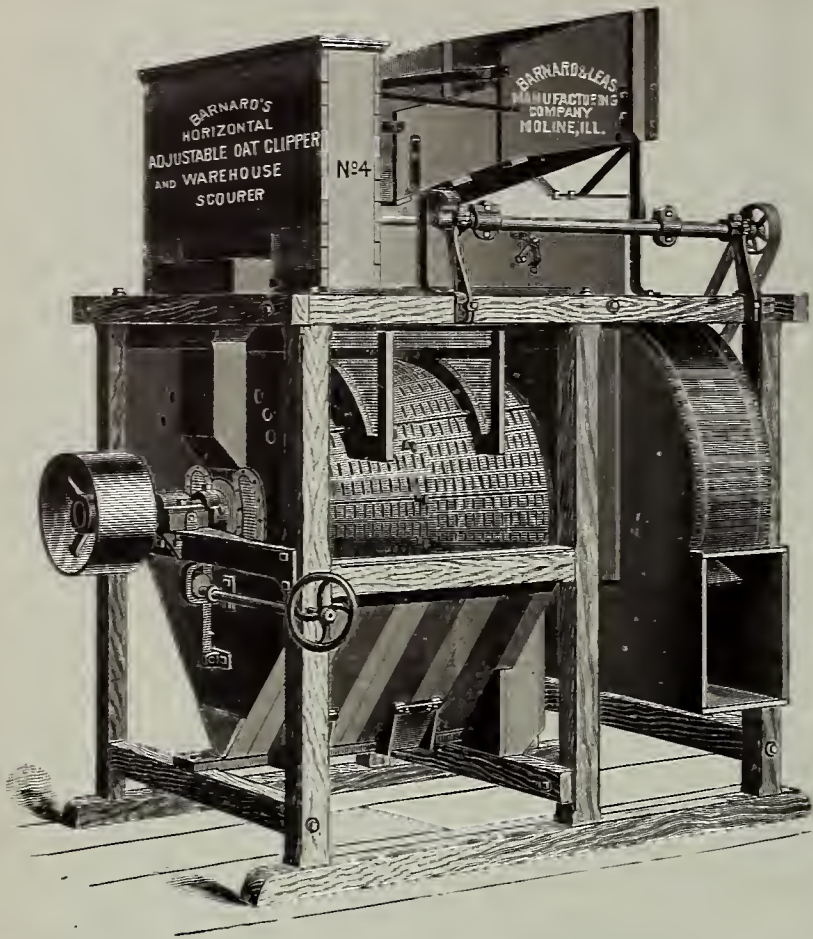
FOR PRICES AND DISCOUNTS
— ON —

**Elevator Machinery
AND SUPPLIES**
— OF —

EVERY DESCRIPTION,

ADDRESS EITHER STEAM OR HORSE-POWER,

**The FROST MFG. CO.,
GALESBURG, ILL.**



Smut in Wheat

TAKE
IT
OUT By Using

BARNARD'S

New Horizontal Adjustable Warehouse Scourer

OF LARGE
CAPACITY.

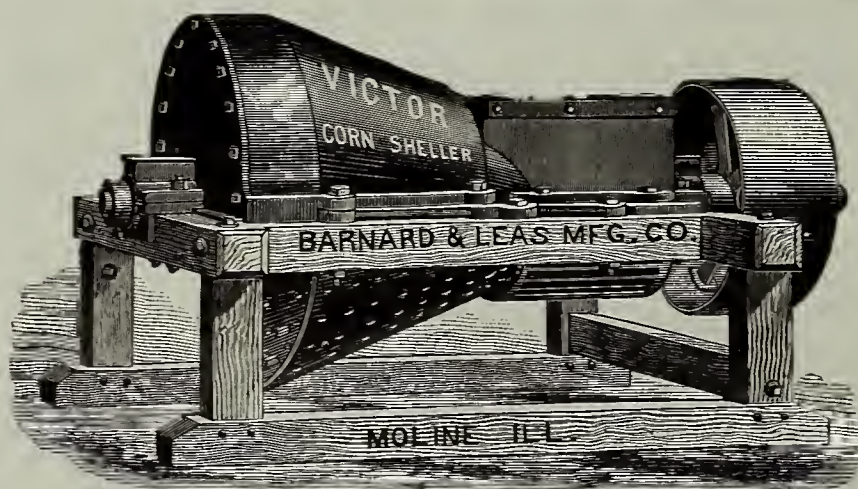
THE BEST SCOURER IN USE.

TRUE
AND TRIED.

It is Also the Best Oat Clipper in Use.

Corn

Corn



The best outfit for shelling
it is the

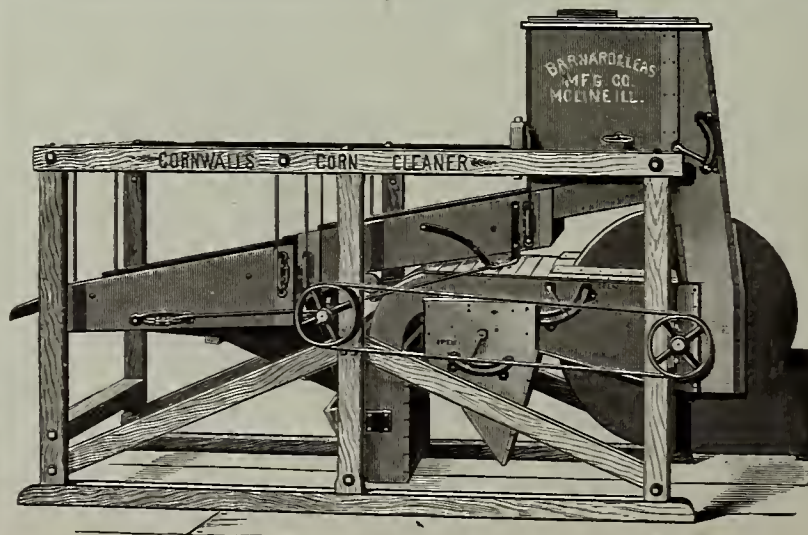
VICTOR SHELLER,

And the best cleaner the
CORNWALL
CORN CLEANER.

We guarantee them to clean the corn
for market cleaner than any other out-
fit on earth. Write for further infor-
mation to

BARNARD & LEAS

MFG. CO.,
MOLINE, ILLINOIS.



Corn

Corn



ARE YOU TROUBLED WITH



GROWN OR LEGGY WHEAT?

...If so we can help you out...

Read the following from parties using our "EUREKA" Horizontal Close Scourers for this class of work. We will guarantee to do as well for you. Prices to suit the times.

CAPACITIES FROM 5 TO 1,000 BUSHELS PER HOUR.

R. D. SNEATH.

A. A. CUNNINGHAM.

SNEATH & CUNNINGHAM,

Grain and Seeds.

TIFFIN, OHIO, Oct. 5, 1896.

THE S. HOWES CO., Silver Creek, N. Y.

DEAR SIR: Your favor of the 3d received and noted. We inclose you our check for \$..... in payment of your No. 2½ Eureka Close Scourer, which we bought of you for handling grown wheat. It is giving the best of satisfaction, in fact we could not get along without it this season.

Wishing you the best of success, as your machine deserves, we are yours,

SNEATH & CUNNINGHAM.

S. J. BROWN, Buyer and Shipper of Grain.

LIBERTY, NEB., Sept. 30, 1896.

THE S. HOWES CO., Silver Creek, N. Y.

DEAR SIR: Some time ago I wrote you about my No. 4 Eureka Oat Clipper. The little difficulty I had with it was overcome before I got your reply. It is one of the finest machines I have ever had anything to do with. It has made me one thousand dollars this season, on leggy or grown wheat. It does the work in the best possible manner and with one operation. It raises the grade and weight of the wheat to our entire satisfaction. Anyone having trouble this season with leggy or grown wheat can add nothing to their mill or elevator that will give them as good satisfaction as your Eureka Machines.

Yours very truly, S. J. BROWN.

FOR FULL INFORMATION OF THESE MACHINES WRITE

THE S. HOWES COMPANY,

"Eureka Works," SILVER CREEK, N. Y.

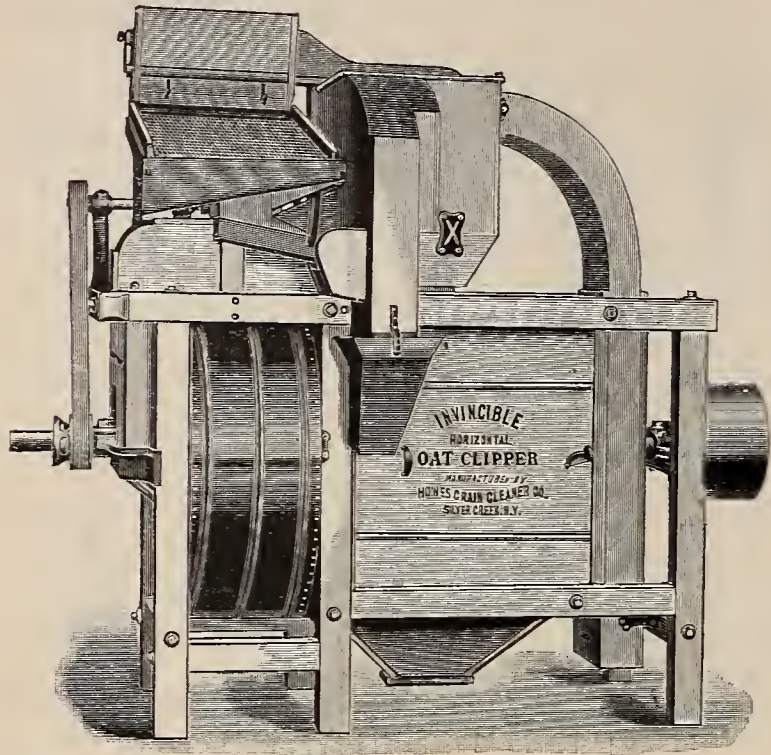


Successors to Howes, Babcock & Co., Howes, Babcock & Ewell, Howes & Ewell, S. Howes.

ESTABLISHED 1856.



THE "INVINCIBLE" OAT CLIPPER



**HOWES GRAIN
— CLEANER CO.,**

❖ ❖ INVINCIBLE WORKS, ❖ ❖

Silver Creek, ❖ New York.

"CANNOT BE IMPROVED UPON" IS THE WAY A PIONEER IN
CLIPPING OATS PUTS IT.

FRANK MARSHALL,
GRAIN,
501 Royal Insurance Building.

CHICAGO, Nov. 24/96. 189

The Howes Grain Cleaner Co.,

Silver Creek, N. Y.

Gentlemen:--

Inclosed please find check in full for the three No. 6
Invincible Clippers you furnished us and which are giving perfect
satisfaction. Please receipt bills and return.

I have used Clippers for a number of years, and am one of
the pioneers in Clipped Oats, and it gives me pleasure to say that
these Clippers do the best work of any I have ever used and I do not
believe they can be improved upon.

Wishing you success in the sale of them, I remain,

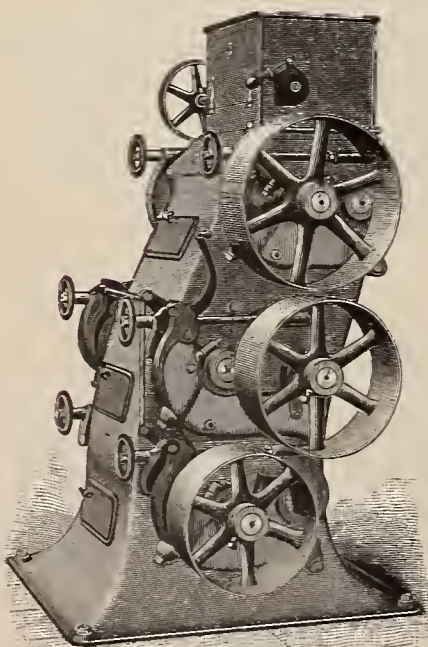
Yours very truly,

Frank Marshall

NORDYKE & MARMON CO., Indianapolis, Ind., FLOUR, CORN AND ELEVATOR MACHINERY.

QUALITY TO SUIT THE MOST EXACTING

PRICES TO SUIT THE TIMES.

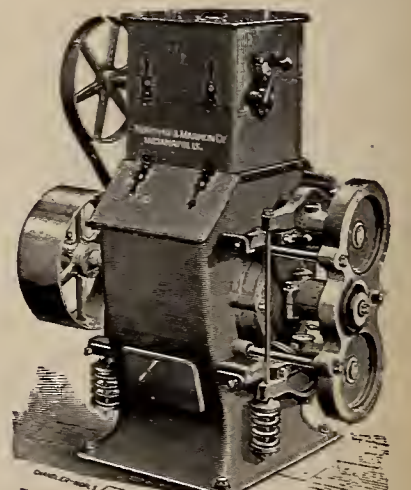


Three Pair High Six Roller Mill.

Corn Shellers,
Grain Cleaners,
Flour and Bran Packers,
Flour Feeders and Mixers,
Portable Buhr Mills,
Hominy Mills,
Wheat Heaters,
Scales,
Shafting,
Pulleys,

Elevator Supplies.

Hangers,
Boxes,
Gearing,
Belting,
Steel Conveyors,
Wood Conveyors,
Link Belt,
Sprocket Wheels,
Engines and Boilers,
Water Wheels,



Three Roll Two-Break Corn and Feed Mill.

TEN SIZES and STYLES of ROLLER, CORN and FEED MILLS

No doubt about the volume of our voice if price and merit talk, and what we say will be
interesting if you intend to buy.

WRITE US, SAYING WHAT YOU WANT.

NORDYKE & MARMON CO., - INDIANAPOLIS, IND.

J. B. ALLFREE MFG. CO.

INDIANAPOLIS, INDIANA.

BUILDERS OF

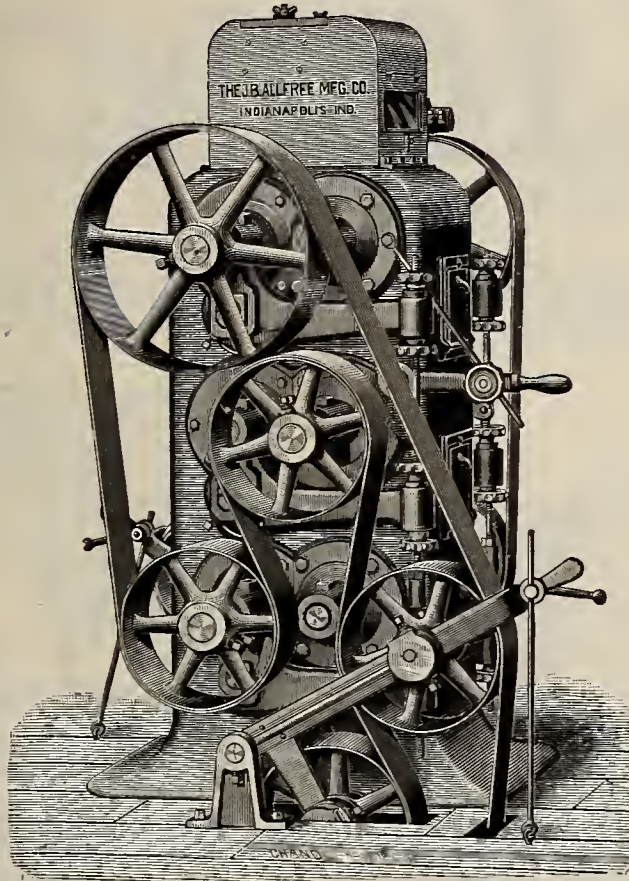
THE HIGH MILL SYSTEM,

An Improved Milling System,

Makes Better Flour, Saves Power,
Room and Labor.

Corn Shellers,
Automatic Engines,
Cornmeal Plants.

Describe wants and write for
Circulars.



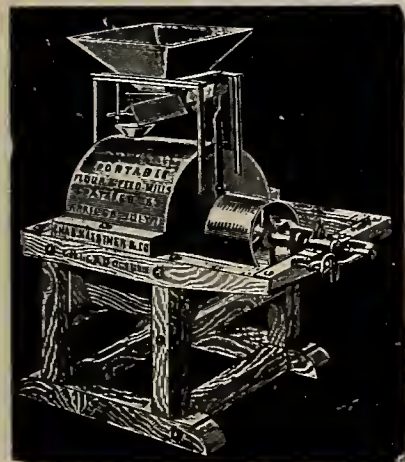
MANUFACTURERS OF

FLOUR-MILL and ELEVATOR MACHINERY.

Improved Rope Drives,
Shafting and Pulleys,
Corn and Feed Rolls,
Aspirating Meal Bolts,
Hominy Separators,
Grain Separators.

SPECIAL PRICES UPON APPLICATION.

Write Us for Prices . . .



ON THE BEST FEED GRINDERS. ON OAT CLIPPERS

That will clip oats with a profit. On
anything you may need in the machin-
ery line. Prices based on gold. Silver
accepted at par.

CHAS. KAESTNER & CO.,

Machinists, Founders and Mill Furnishers,

241-249 South Jefferson Street, - Chicago, Ill.

ALL GOODS SOLD BY US GUARANTEED.

An Offer to Hay and Grain Men

THE AMERICAN ELEVATOR AND
GRAIN TRADE,

\$1.00 per year.

THE HAY TRADE JOURNAL AND
DIRECTORY,

MONTHLY.

\$2.00 per year.

WEEKLY.

BOTH FOR \$2.00.

ADDRESS EITHER

The Hay Trade Journal, OR
Canajoharie, N. Y.

Mitchell Bros. Co.,
184 and 186 Dearborn St., Chicago, Ill.

BISULPHIDE OF CARBON,

Of Special Grade for Killing Insects in Warehouses, Etc.

Send for Instructions and Order Direct from
the Manufacturer,

EDWARD R. TAYLOR,

CLEVELAND, OHIO.

SEEDS

Grain, Clover and Grass Seeds,
CHAS. E. PRUNTY,
MAIN & MARKET SAINT LOUIS.

MAKE

Iron or Steel
Roofing,
Siding,
Ceiling,
Arches,
Lath, Shutters,
Doors,
Weather Boards,
Ridgecapping,
Tin Plate,
Galvanized Iron,
Sheet Iron,
Painted Iron.

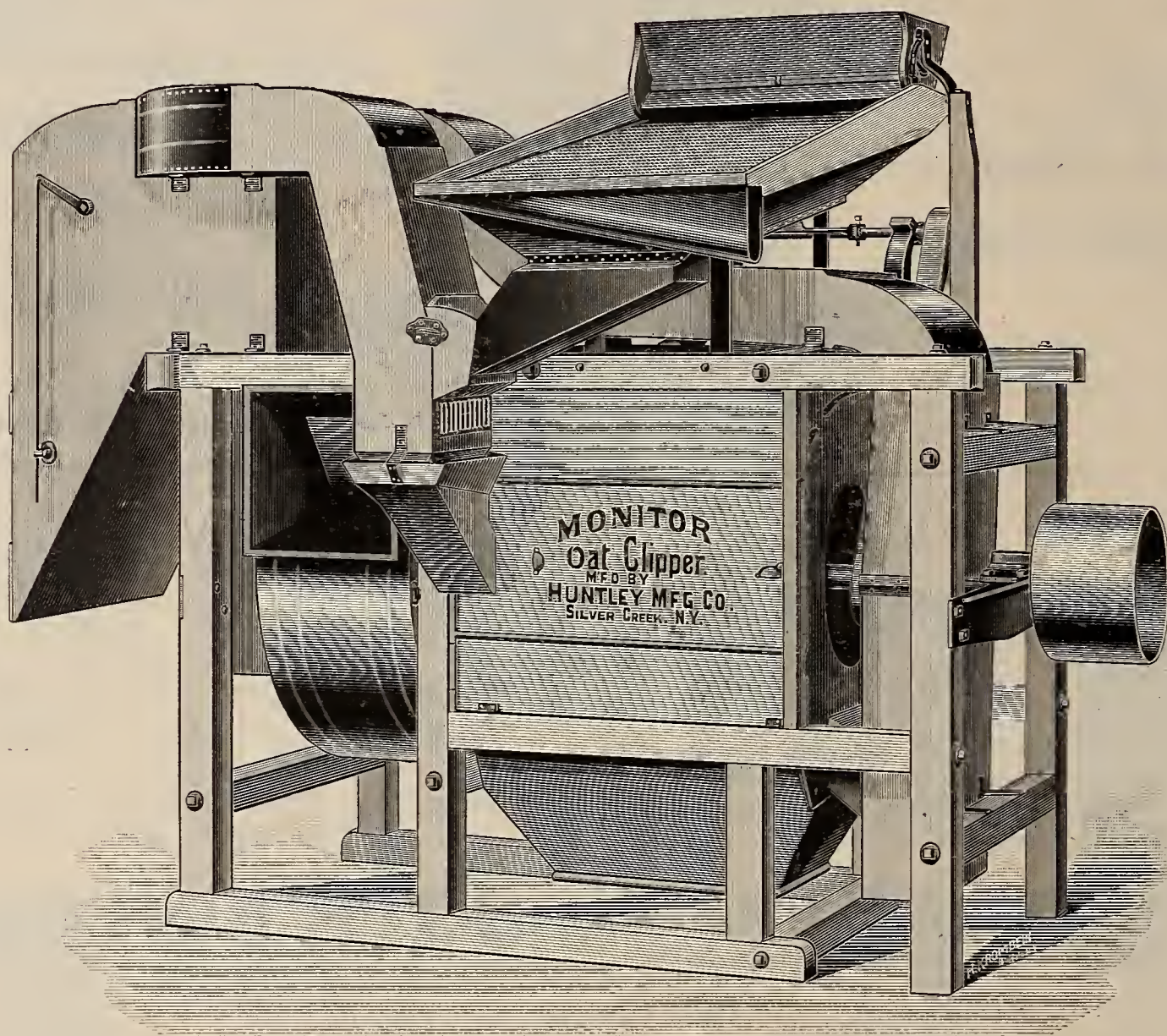
The
Cincinnati
Corrugating
Company,
Box 369,
Piqua, O.

Get our Prices and
Discounts.

OAT CLIPPERS

THE MONITOR

Built on Honor. Sold on Merit.



In use in many prominent elevators, and highly indorsed by every user.

CAPACITY FROM 50 TO 1,200 BUSHELS PER HOUR.

Monitor Grain Cleaners

Continue in the lead. No competition when it comes to high-grade work. ❀❀

HUNTLEY MFG. CO., = Silver Creek, N. Y.



A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. XV.

CHICAGO, ILLINOIS, DECEMBER 15, 1896.

No. 6.

{ ONE DOLLAR PER ANNUM.
SINGLE COPY, TEN CENTS.

PRESIDENT E. S. GREENLEAF.

The organizers of the Grain Dealers' National Association were particularly fortunate in selecting for President a man who is known and highly respected by a large number of grain dealers in the winter wheat district.

Mr. E. S. Greenleaf was born in Maine, and while a lad came to what was then considered the far West, locating in Sangamon County, Illinois. His youthful environments precluded his receiving an education beyond what he could obtain at the then primitive common schools of the neighborhood, but he made the most of his limited advantages, and soon developed an aptitude for business. He turned his attention to railroad pursuits, in which he met with rapid advancement. For many years in the early days of the Wabash Railroad he was prominently connected with the road, being its agent at Naples, Ill., when that point was its western terminus, and its Western and Southern outlet was solely via steamboats on the Illinois River. At the same time he was manager of the then important coal mines at Neelyville on Wabash R. R. Later, and for nineteen years, he was superintendent of the Jacksonville Southeastern Railroad, and it was under his management that this line of road was constructed and equipped, extending from Jacksonville, Ill., to Mt. Vernon, Ill. During this period he engaged in the grain trade as buyer at country stations, and since his retirement from railroad management he has given his attention to buying and shipping grain.

Mr. Greenleaf is the senior member of the firm of Greenleaf & Baker of Atchison Kansas, where, under the immediate direction of F. M. Baker (the resident partner), they have conducted successfully since 1883 an elevator and grain business that has increased rapidly. They operate some twenty-five stations on the line of the Missouri Pacific R. R. in Kansas and Nebraska, also owning and operating a fine elevator of 250,000 bushels' capacity at Atchison, Kan., where they rehandle the grain they receive at their country points and prepare it for the market. They are well known as large distributors of grain throughout the Southern states and Mexico, and also ship large quantities of corn to the Atlantic seaboard. Mr. Greenleaf is extensively engaged in the buying of grain under his immediate direction in the state of Illinois, at points on the Wabash R. R., operating under the name of Greenleaf & Baker, also at several points on the Chicago & Alton R. R., operating under the firm name of Greenleaf & Co. The firm was a member of the old Kansas and Nebraska Grain Dealers' Association. It was also one of the charter members of the Kansas Asso-

ciation organized at Topeka in July, 1890, the principal object of which was to obtain compensation from railroad companies for every 100 pounds of grain shipped from the elevators of members.

Mr. E. S. Greenleaf has been a member of the Illinois Grain Dealers' Association for several years, and is now a member of the Arbitration Committee. He is a man of mature years, conservative and cautious. He has given considerable study to the rights and wrongs of the regular grain dealer and readily perceives the delusive fallacies of the argu-



PRESIDENT E. S. GREENLEAF.

ments advanced by traffic managers in support of their positions. That he will manage the affairs of his office carefully and to the profit of the Association cannot be doubted.

Mr. Greenleaf, although never an aspirant for political honors, has for several terms been the choice of the citizens of Jacksonville, Ill., as their mayor, and his occupancy of this position was noted as a business administration doing credit not only to himself, but to the city. Wherever Mr. Greenleaf is known, and his acquaintance is a very extensive one, he is regarded as a man of sound judgment, and of most unswerving integrity.

Help along the work of reforming the abuses of the grain business by joining the Grain Dealers' National Association.

MEETING OF THE CHICAGO RECEIVERS' AND SHIPPERS' ASSOCIATION.

The annual meeting of the Grain Receivers' and Shippers' Association of Chicago was held on December 2; the following officers were re-elected for the ensuing year: President, John Hill Jr.; Vice-President, S. H. Greeley; Treasurer, Wm. Nash; Secretary, W. N. Eckhardt.

The meeting fully discussed the scandalous delays of grain bought by buyers and shippers here, and which during the last few days in September, and during October and early November, was sent to Eastern lines, where it was intended that such oats be clipped, cleaned and handled under the buyers' and shippers' instructions. It was charged that in many cases the delays were due to the fact that the oats bought could not possibly be clipped up to the requirements of the shippers who purchased the property at Chicago, and that a large part of the delay occurred on account of the indifference of the buyers and shippers to the outcome, and also because the sellers were not advised as to the actual conditions prevailing.

The following resolution was adopted and a committee of three appointed to take up the matter with the Board of Directors of the Board of Trade of the city of Chicago, to see whether or not rules could not be devised to correct the abuses:

Whereas, The trade in the city of Chicago, in handling grain for transfer for shipment East all rail, has experienced the lack of equity and necessary rules between buyer and seller; and

Whereas, Buyers do not make known to sellers, at time of purchase, that grain bought is intended to be clipped, cleaned or mixed in the yards of the Eastern carriers, and

Whereas, Purchases by shippers for such clipping, cleaning or mixing often largely exceed the operating facilities of the transfer houses through which such shipments are routed, thus frequently causing Western cars to be used for storage purposes, to the detriment of the receiving interests in this market, as well as to the severe loss and inconvenience of those upon whom we are largely dependent for business in the West and Northwest; and

Whereas, It is of the utmost importance that we recognize the magnitude of the competition at other points for Western grain, and make an effort to rectify the delays in transfer which now beset Chicago. Therefore be it

Resolved, That the President of this Association appoint a committee of three, to confer with the directors of the Board of Trade of the city of Chicago, with a view to the establishment, if possible,

of such rule or rules as will rectify the delays above referred to.

The matter regarding the organization of the complaint bureau, was referred to a committee, but it has not taken shape, as yet. The sentiment is growing in favor of such a bureau.

President Hill has appointed the following standing committees for the ensuing year:

Transportation: S. H. Greeley, chairman; Arthur R. Sawers, J. S. Carpenter, Peter Eschenberg, Jos. Gregg.

Warehouse: H. F. Dousman, chairman; H. J. Paten, F. J. Schuyler, Phillip Schifflin, F. A. Maurer.

Weighing: W. N. Eckhardt, chairman; D. H. Harris, A. B. Lord, C. L. Dougherty, F. Dickinson.

Inspection: C. M. Armstrong, chairman; Frank Marshall, J. G. Snyder, O. A. Kendall, W. H. Chadwick.

Memberships: F. E. Winans, chairman; E. B. Baldwin, A. L. Somers.

W. N. ECKHARDT, Secretary.

FIRST VICE-PRESIDENT P. S. HEACOCK.

Mr. P. S. Heacock of Falls City, Neb., who was selected for First Vice-President of the Grain Deal-



FIRST VICE-PRESIDENT P. S. HEACOCK.

ers' National Association, has been engaged in the grain business for 20 years. At present he operates elevators at Shubert, Verdon, Preston and Falls City, his headquarters being at the latter city.

Mr. Heacock is a member of the Nebraska Grain Dealers' Association, so is not new to Association work. He knows the needs of the regular dealers, and has their interests at heart.

COMPLAINS AGAINST BALTIMORE CORN MARKET.

"I was down east this week and I found the corn market badly demoralized on account of the great quantity of new corn shipped to those centers before it was thoroughly ripened," said Mr. W. B. Probasco to a reporter for the Pantagraph of Bloomington, Ill., November 19. "I learned that at Baltimore corn was worth only eight cents, and some of it had been thrown on the hands of the railroad companies for the freight. Baltimore is the meanest market in the United States, for the reason that there is no industry there which can use damaged corn and as a consequence the shipper is a heavier loser than if he had sent it to Peoria or Buffalo or even to New York City. This condition of the market I have just described has never been equaled in my connection with grain trade."

LARGE CARS AND MINIMUM WEIGHTS.

The present arbitrary minimum weights which are assessed upon light or bulky articles necessarily produce a wide difference in rate per hundred pounds, varying according to the size of cars furnished, says the Railway Review. It is to be said that traffic men have done their utmost to minimize this inequality, but so long as the prescribed carload minimum on any article is greater than can be loaded into the smallest car in general use, so long must these inequalities in rate continue. What is needed is something that will effect an equalization of charges, so that the shipper who is furnished a 30,000-pound car of small cubic capacity will not be compelled to pay a higher rate per hundred pounds than a competitor in the same line who is furnished a 60,000-pound car with double the cubic capacity.

Investigation in connection with this matter has made known the weight per cubic foot of practically all light and bulky articles offered for shipment. Few, if any, cars less than 28 feet in length are now in general use upon the railroads, and it would be comparatively easy matter to determine from the cubic capacity of such cars the rate that would give the required revenue upon a carload of any given article loaded in such cars. When this is ascertained, minimum weights for such articles could be abolished and the carload rate thus determined could be applied to any car regardless of size, provided it was full. It may be objected that this plan contemplates the employment of the entire cubic capacity of cars in every case. This would be the ideal condition; but it would probably have to be modified, so as to permit the carload rate as above determined to apply on large cars even where they were not altogether full. This could be easily provided for by a series of minimums for the various size cars below which the carload rate would not apply.

The effect of such a plan would be to establish an absolute equality of rates as between all shippers of the same classes of goods. It would also make it out of the power of any traffic man to favor particular shippers, and wholly remove the present feature of discrimination which has been the cause of so much complaint.

DEMURRAGE AT INTERIOR AND SEABOARD POINTS.

It may not be generally known, that at all terminal points at the seaboard four days or 96 hours, are allowed on cars unloaded from track, and 10 days free storage is allowed on all flour, grain and feed, unloaded in warehouses or elevators, writes Wilson Welsh of Philadelphia in the Miller's Review. Contrast this with the 24 and 48 hours allowed at interior points—24 hours when working under general average rule, or 48 hours when applied to single cars. Consider also that the work of loading or unloading cars at interior points is done at the expense of the shipper and receiver. At the seaboard, this work is done by, or paid for by the carrying companies, except when receiver elects to unload from cars. Then as before stated, he has 96 hours, and in addition, on receiving notice of arrival of car he may order it to any point or yard in the city, and he still has 96 hours after arrival of car at the point designated, thus securing in practice 5 to 6 days from arrival of car.

Another marked advantage to receivers of flour at the terminal points, is the privilege of ordering out cars from the warehouses at the expiration of 10 days and having them delivered in cars to a private warehouse or one of the company's yards without any additional charge. Think of the expense here involved, 3 or 4 cents per barrel paid to the warehouse company for unloading cars and storing it for 10 days, and an additional charge for loading into cars, to say nothing of the use of the cars and its transportation to the point designated—all at the expense of the railroad company.

A mere statement of these facts is certainly sufficient to justify the demand for more equitable treatment, a longer period in which to handle, load and unload cars at interior points. It is not our pur-

pose, in calling attention to existing rules at terminal points, to convey the impression that the privileges granted are too liberal; on the contrary, it is necessary in the conduct of business that the present system should exist. The carrying companies have found it to be to their interest to accord these privileges in contrast with the old system of making storehouses of their cars. Yet is it not also self-evident, that the miller and receiver of grain and feed, at interior points, who pays, as a rule, the same rates of freight, and in many cases a higher rate, is placed at a great disadvantage by these discriminations?

SECOND VICE-PRESIDENT E. A. GRUBBS.

The Second Vice-President of the Grain Dealers' National Association, Edgar A. Grubbs, whose portrait is given herewith, is well-known to the majority of the grain dealers of the Ohio Valley. He was born near Germantown, Ohio, Sept. 2, 1859. His parents resided on a farm near Lewisburg, Ohio, until 1874, at which time they moved to Greenville, Ohio. His father entered into partnership with D. Zimmerman, under the name of Zimmerman & Grubbs, as grain dealers. While yet a schoolboy



SECOND VICE-PRESIDENT E. A. GRUBBS.

Mr. Grubbs worked in the warehouse on Saturdays and during vacations, thus gaining an intimate and practical knowledge of the warehouse business.

In 1878 Mr. Grubbs took a commercial course in the Cincinnati Business College, and in 1879 entered the employ of Zimmerman & Grubbs as bookkeeper. In 1883, after his father's death, Mr. Grubbs started in the brokerage business, buying grain and soliciting consignments for Eastern houses.

In 1886 he formed a partnership with Mr. Conrad Kipp of Greenville, Ohio, and they started in business as track buyers, under the name of Greenville Flour and Feed Co. During the last year the name was changed to the Greenville Grain Co. They are large handlers of grain and hay, and have made a specialty of milling wheat, endeavoring to furnish their customers with the best wheat the market affords. Mr. Grubbs continues to buy for Eastern houses and during the busy season is in correspondence with the majority of grain dealers in Ohio and Indiana, making daily bids to over 500 dealers.

Mr. Grubbs is an up-to-date, progressive business man. He has always urged caution in buying, and the avoidance of recklessness or carelessness in the handling of grain. The large business done in the mills by the Greenville Grain Co. has been gained by the faithful fulfillment of all promises, and the firm's well-known reliability.

Mr. Grubbs has always been averse to the feeling

of enmity which is sometimes rife among the country dealers, and has done much to bring about friendly competition among the grain dealers with whom he has come in contact. In the circular letters he sends out Mr. Grubbs frequently implores the country dealers to get together, and to stop bidding more than the prices at central markets justify. In a circular dated July 6 he said: "I find many grain dealers stand ready to knife one another. That is in regard to prices paid to the farmers. First one will spring the price in order to get a crop from a competitor, and, of course, he hears of it, so up goes the price until everyone is paying all he can stand, or a little more. As a consequence each one finds at the close of the year he has made nothing, but has done an almighty sight of hard work. Gentlemen, this is not right. Get together and fix a price which will pay you, and then stick to it. You will make more out of the business, and feel better towards one another. If you cannot hold together, let the other fellow have an occasional crop rather than work for nothing. Do not spring the price to a farmer who lives near your competitor; the chances are that he only asks for your price to get you to help spring the price of the dealer near him. The farmer is not good at keeping secrets. If the truth were known, the high prices farmers tell they are offered originate with themselves. If you are paying all you can afford, do not believe anything you hear, and only one-half of what you see. Strive to cultivate a friendly feeling toward your competitor, talk to him and you will find he is not a bad fellow."

This is surely good advice, and those who heed it will surely profit by it. Mr. Grubbs is just as greatly interested in the success of the Grain Dealers' National Association, and believes it will be to the interest of all grain buyers to join and help along the organization to its highest usefulness.

SECRETARY W. H. CHAMBERS.

W. H. Chambers, who was selected for Secretary of the Grain Dealers' National Association, is a young man, full of vigor, and not afraid to work. An enthusiastic believer in the benefits of organization for grain dealers, he has entered upon the duties of his office with a firm determination to win, and no doubt every regular grain dealer who desires to have such reforms instituted as will enable him to make a living out of his business will promptly extend a helping hand.

William H. Chambers, whose portrait is given on this page, was born on a farm in Newton County, Indiana, Oct. 28, 1866. At the age of one year his parents, John W. and Mary A., moved to Remington, Ind., and lived there until the year 1871, when they moved to Irvington, Ind., a suburb to Indianapolis, where his father engaged in the real estate business. Having been engaged in the grain business prior to this time, he concluded to engage in it again, and in 1877 moved to Waveland, Montgomery County, Ind., and purchased wheat for the next two years. Up to this time William had spent all his time in the school room, but as he was around the office and elevator much of his time he formed a liking for the grain business.

In 1878, when the Wabash made its extension known as the Omaha extension, running from Brunswick, Mo., to Omaha, Neb., his father was offered the exclusive privilege of buying grain on this road, if he would open up a line of elevators. He moved to Maryville, Mo., in 1879, opened up a large line of elevators and ran them until 1884. During this time William attended school and worked in his father's office, shoveled grain with the hands, run the engines when engineers were short, and, in fact, did anything that he was called upon to do.

In 1884, at the age of 18, he associated himself with his father in track buying for the Grier Commission Co. of St. Louis, making Maryville headquarters until 1887. In the meantime the business had extended over so large a territory that it was thought advisable to open an office in Kansas City. This was done, and he had charge of it until 1890. Being thrown out of business at this time by the failure of Grier Commission Co. he concluded to go into the shipping business, so in the fall of that

year he purchased an elevator at Hepburn, Iowa, which he owns and operates at the present time. Desiring a change he left his elevator for a time, and in 1893 accepted a position with the Hancock-Hodgson Grain Co. He staid with them one year, then went to Des Moines and accepted a position with the Hawkeye Insurance Co. of that place, as head bookkeeper. Not liking the confinement, after a year he went back to his elevator and has remained there until the present time. In 1889 he was married to Mecca Dawson of Maryville, Mo.

He has been actively engaged in the grain business some 16 years, practically in all of its departments. He has been connected with several associations, and at present is a member of the Board of Managers of the Grain Dealers' Association of Southwest Iowa and Northwest Missouri, an aggressive organization of about 125 members, which has been doing excellent work in the advancement of the common interests of regular grain dealers.

THE MUTUAL PRINCIPLE IN INSURANCE.

BY B. V. HUBBARD FORMERLY OF THE ILLINOIS INSURANCE DEPARTMENT.

No plan of insurance can be perpetuated unless the principles of general average are observed and general average cannot be attained without the cooperation of many units or individuals. Hence the principle



SECRETARY W. H. CHAMBERS.

ple of cooperation pervades every form of insurance, and is the very essence of organization.

Mutuality of interest consists in the equality of all similar units or individuals composing the cooperative organization, and also power invested in individuals to control the business and create laws of management, and to delegate authority to officers and directors who act as trustees to execute the will of the members.

While cooperation is necessary in insurance, yet cooperation is by no means synonymous with mutuality. Nations exist wherein all classes, castes and degrees of humanity cooperate to maintain government, and while cooperation is perfect, mutuality is absent. There is no common interest as the cooperators have unequal burdens, inequitable rewards, and suffer unjust discriminations. Thus, while all insurance is cooperative in regard to securing general average of risk, in many companies the members prefer to escape the moral responsibility of a part in the management, or financial liability to excessive and unusual losses; and in shifting such responsibilities also agree that the few persons who accept the responsibilities may also monopolize, as compensation, the financial gains, and governmental powers and advantages which may accrue.

Mutual cooperation is a condition where the cooperators agree to unite their interests that each shall contribute in exact equitable proportion to the risk borne for his benefit. That he shall pay neither more nor less than other members having like risks. That if losses are greater than the anticipated rate he shall contribute extra pro rata thereto. Or, if

losses are lighter, he shall receive in abatement of cost his exact proportion of such diminution; that he shall participate in the duties of government, and that his voice shall be as potential as that of any other member therein. That the cooperators shall, from necessity, delegate their powers for short periods of time to trustees, but such power springs from and has its source in the members, and any diversion thereof is a violation of the fundamental principles of mutuality.

The collection and use of proxy votes, when no specific instructions accompany the authority for proxy, is objectionable in principle, as the will of the mass of the members is substituted by the will of the actual voter who holds many of the votes subject to his power. The democratic principle is overthrown, and an oligarchy is established which is the reverse of mutual participation.

Mutual companies are most likely to succeed when they are fully controlled by the mass of the members, and the most effective method of strengthening an organization is to fully develop the power of the individual member and remove any tendency to oligarchic government.

As officers of mutual organizations are merely trustees to serve the interests of the organization, they must act under corporate limitations, and in conformity to the objects of the corporation. Hence the expenditure of money for objects not contemplated in the functions of the organization, and not for the mutual benefit of the members, is at variance with the principles of mutuality, and it has been held that trustees making such expenditures could be held responsible therefor.

An officer or trustee delegated by the members must not betray his trust by doing anything to injure the general interests. He must not arrogate new powers or exceed his delegated authority. He must not use the funds for his own purposes, nor make contracts binding on the membership which would tend to injure the common interests.

The greater publicity given the transactions of a mutual society will cause greater inspiration of confidence among members and the public. The members have a right to know the transactions of their trustees, and at all business meetings it would not be unreasonable to have the "ayes and nays" called for, that no trustee shall avail himself of a hiding place behind a viva voce vote.

One of the greatest dangers to cooperative mutuality is the loss of confidence in the stability of management and strength of organization. When many persons share the responsibilities of management, jealousies and criticisms are multiplied, and the dangers of discontent are sometimes more fatal than excessive losses. Confidence is equally as essential as assets.

The duties of cooperative mutuality are voluntarily assumed. And as such assumption is not compelled, it is more binding as a matter of principle. Pure mutuality needs no better law for its government than the golden rule. For a terse definition of a good law for the government of mutual bodies none would be better for adoption by each member than "Do unto others as you would have others do unto you."

Mutual bodies are governed by the will of a majority of the members, and it is the duty of the individual to acquiesce in the will of the majority and sink his individuality in a common effort to sustain the unity of the organization, for the very perpetuity of mutuality depends upon the absolute and unquestioned power of the majority. Mutuality means that all shall be governed by a reciprocal interchanging, giving and reception of benefits. No strife can exist in an ideal mutual body, except competition to excel in doing the most to advance the common interest. Grating competition ends, perfect and equal distribution of burdens and benefits obtains. The only hope of extra reward is on account of making larger sacrifices and suffering greater self-denial. Every cooperator has agreed to sink his personality, and promote the community of interest. Those who contribute most shall receive most.

The benefits of cooperative mutual insurance organizations cannot be called charities, because each member contributes and pays his just proportion of

such indemnity, and has rendered an equivalent in money for that which he receives. If any member of an organization receives more than he is entitled to, or receives anything whatever for which he has not rendered an equivalent, such an organization is not mutual, as it bestows gratuities on some at the expense of others.

Ideal mutuality consists in exact equality. Risks assumed must be similar. A company which insures farmhouses and powder mills at the same rate is not mutual. An accident company which takes ministers and brakemen on equal terms is not mutual. A life office which insures men at age 50 for the same premium as men at 25 is not mutual; one that insures an inferior race at the same premium charged superior members is not mutual.

A company which complies with laws of states which compel better treatment to citizens of such states than is given to the general membership is not mutual, and laws which are passed seeking to make such discriminations tend to legalize that which is morally wrong.

Corporations may and do violate each and every one of these principles; under such conditions they are coöperative, but lack the principles of mutuality. Pure mutuality is a Utopian dream. Its attainment can be had when all men are intelligent; when men become strictly honest and unselfish; when confidence in the motives and actions of men is supreme; when mathematical mistakes cannot occur, and when our legislatures make no unequal laws.

It is found that they flourish best in nations having democratic government. The minds of such people are more receptive of mutual principles, and the laws are easily moulded to accommodate such organizations.

Full statistics of mutual insurance are not obtainable, but a partial showing from the Illinois insurance department gives the following:

	No. of Companies.	1892. Assets.	1892. Insurance in Force.
Mutual life insurance companies.....	14	\$574,963,115	\$2,574,941,241
Mutual assessment life and accident associations.....	57	12,480,321	1,976,569,363
Mutual fire companies, general business.....	15	11,864,954	262,495,662
Mutual township and fire insurance companies....	181	160,455	90,216,914
Totals.....	267	\$599,468,845	\$4,904,225,180

The history of corporations having mutual charters has been noble. Mutuality has its great achievements. Its wealth is counted by more than a billion of money. Its moral influence is manifest in teaching men to make strong combinations for general benefits; its tendency is to promote and exemplify true democracy, and the bounties conferred upon its beneficiaries cannot be computed.

Let us hope that the evolutionary progress of mutuality will rapidly proceed, as it is a gauge of true human development on grand lines.

M. McFARLIN.

The grain dealer selected from Iowa to be a member of the Board of Directors of the Grain Dealers' National Association was M. McFarlin, secretary and treasurer of the McFarlin Grain Co. of Des Moines. Mr. McFarlin is treasurer of the Central Iowa Grain Dealers' Association, and has been identified with aggressive association work for some time. He is an ardent believer in the advantages of organization, and will do everything in his power to make the National Association a success. He has given special attention to the impositions heaped upon the country elevator men, and has worked hard to secure a rental from the railroad company, as he is convinced the elevator man is justly entitled to it.

He started in the grain business in Illinois, on the old Gilman, Clinton & Springfield R. R., at a town called Bellflower, in 1874. From there he went to Mt. Pulaski, Ill., and after remaining there eight years went to Des Moines, and has been there since 1881. While at Mt. Pulaski his elevator

burned, and he rebuilt a good one with steam shelling, cleaning and weighing facilities in it. The McFarlin Grain Co. is now operating at twenty stations, with an elevator at Madrid on the C. M. & St. P. for transferring, cleaning grain, clipping oats and shelling corn.

A. E. CLUTTER.

A. E. Clutter, of Clutter & Long of Lima, Ohio, whose portrait is given here, was selected, as one of the members of the Board of Directors to manage the affairs of the Grain Dealers' National Association during the first year of its existence.

Mr. Clutter was born in Ohio about forty years ago. After serving eight years as street buyer for a prominent firm in Van Wert, Ohio, he started in business at Lima in 1878, and operated on the Pennsylvania line. When the Chicago & Atlantic, now the Chicago & Erie, was built he established a line of elevators on the Lima Division of that line. He is well known to a large number of grain and hay dealers in the Eastern and Central cities, and in the interior.

A firm believer in the benefits of organization, he is a member of the Ohio Grain Dealers' Association.



DIRECTOR A. E. CLUTTER.

as well as of the National Association of Hay Dealers. He believes that what is worth doing at all is worth doing well, and he is confident that the hearty coöperation of the grain dealers generally can be secured to make the Grain Dealers' National Association a success.

RIVAL GRAIN ROUTES.

The problem of the cheapest way of getting our surplus grain to the seaboard is never out of sight, and never can disappear as long as there are half a dozen routes all seeking to establish themselves in the lead. There seems to be, for all that, no good reason why the Buffalo route should not remain the cheapest of them all, in spite of the reported "gains" and "showings" made by the various Southern and St. Lawrence routes that are making their appearance periodically as if to laugh at our pretensions, and the pretensions of each other.—Enquirer, Buffalo, N. Y.

The Buffalo route would have little to fear if it could rid itself of the Buffalo-New York railroad elevator pool, which seems to be determined to drive the grain to other routes by exacting extortionate charges for transferring grain.

Readers who declared in favor of organizing the Grain Dealers' National Association should not be so slow in sending their applications to Secretary Chambers. Act promptly.

THE TRANSPORTATION OF GRAIN.

[From a paper by Percy Wilson Britton, Assoc. M. Inst. C. E., read before the Institution of Civil Engineers, London, and awarded the Crampton prize.]

The growth in the demand for the food supplies of the world has led in recent years to a great increase of cereal produce, and the consequent exigencies of rapid transit and handling of large quantities of grain have necessitated a corresponding development of structural and mechanical appliances and a modification of all the conditions of supply.

The chief imports of grain to the United Kingdom are from America, India and the regions around the Mediterranean; for which countries the wheat crop returns for 1891 were:

	Bushels.
Canada.....	55,735,000
United States.....	611,780,000
	667,515,000
India.....	255,434,000
Australia and New Zealand	33,874,000
	289,308,000
Russia, Roumania and Bulgaria.....	274,735,000
Asia Minor and Egypt.....	48,169,000
Italy and Spain.....	198,150,000
	521,054,000

While the grain produce of Russia represents $1\frac{1}{2}$ bushels per inhabitant, and of India about 1 bushel per inhabitant, the produce of the American continent is equivalent to about 10 bushels per head. The census returns of cereal products in the United States for the years 1879 and 1889 show an advance of 30 per cent. during that period on the quantity (2,697,580,229 bushels) raised of the six principal kinds of produce. The most marked increase was in maize (367,481,767 bushels) and oats (401,348,555 bushels), about 90 per cent. of it being in the North Central States; though the South Central States show an increase in maize of over 69,000,000 bushels, while the chief feature of the Western States is the increase of 50 per cent. in the growth of wheat. In Iowa there are over 7,000,000 acres yielding more than 200,000,000 bushels of maize, while next in order of production are Illinois, Missouri, Nebraska, Kansas, Indiana, Ohio, Texas and Kentucky, this group representing the great maize yielding territory of the United States.

Chicago holds a central position between the lake ports and the Eastern and Southern outlets. Detroit occupies an equally commanding position, but its storage capacity is small on account of the through transit not requiring manipulation at this point. The resources of Galveston and New Orleans are as yet only in an early stage of development. New York is the great outlet for Atlantic shipments, and all these ports are well provided with appliances for the rapid handling of grain. At Baltimore a cargo of 98,000 bushels has been loaded in eight hours thirty-five minutes, while at Philadelphia the following speeds have been obtained:

Port Richmond Elevator, 110,053 bushels in 8 hours.

Girard Point Elevator, 72,000 bushels in 5 hours.

Girard Point Elevator, 105,500 bushels in 8 hours 10 minutes.

The gigantic granaries, or elevators, typical of the American grain trade, are, in the main, the outcome of the accumulation or "warrant" system of supply regulated by the Boards of Trade established at all the important commercial centers.

The amount of grain dealt with in 1893 at Chicago in the "regular" elevators—those registered by the Board of Trade for state grading—was about 110,000,000 bushels, of which the Armour Co.'s elevators took some 34,000,000 bushels. In addition about 120,000,000 bushels were received in cleaning houses and mills for transfer or local consumption. The value of the crops thus placed on the market, within the three or four months following harvest, averages about £350,000,000, in movement over thousands of miles of railway and waterway; transferred from the one to the other at junction or terminal points; stored in the city elevators, or shipped into ocean vessels. About 28 per cent. of the wheat crop and 4 per cent. of the maize is exported. These commercial necessities form the basis of the structural and mechani-

cal developments of modern grain handling appliances.

In India the conditions are so entirely different that no such development of storage and transfer facilities has yet been developed. The climate permits of storage in the open air during seven or eight months of the year without rent or fire insurance; while the extreme cheapness of labor greatly discounts the saving by machinery. Indian grain is also not well adapted for storing in bulk for any length of time. The railway systems also are not sufficiently developed to enable large quantities to be conveyed quickly to any central point; nor are large tracts of land laid down for any one class of grain which would justify sufficient centralization accommodation.

The consideration of transportation involves the appliances for transfer of the grain between the different systems of conveyance; grain may be conveyed by train, road vehicle, ocean vessel, or by lake, river or canal vessel for inland navigation. The water highways of the United States are of great length, forming a series of lakes from west to east, and, with canals and rivers, afford continuous communication from the Western states to the Atlantic Ocean. Most of the grain is collected in the country and brought to the terminal ports such as Duluth or Minneapolis, or by railway or canal to Chicago. From either point it is taken across the lakes to Buffalo, and then by water by way of Montreal or the Erie Canal, or by rail to New York or one of the other Eastern ports. The chief elevator stations are Duluth, Minneapolis, West Superior, Milwaukee, Chicago, St. Louis, Buffalo and New York. The St. Lawrence route by way of Montreal, and the Mississippi route to the gulf ports (Galveston, Velasco, Mobile and New Orleans), are in course of development; and extensive improvements of the Erie Canal are in contemplation. A canal is also proposed between the southern end of Lake Michigan, near Chicago, and a point near Toledo on Lake Erie, a length of nearly 140 miles.

Electricity has been successfully used for traction of canal boats on the Erie Canal. The average speed attained was about 5 miles, and the maximum 7 miles per hour, the motor towing six barges. The usual cargoes for lake and canal vessels are between 12,000 bushels and 20,000 bushels; but at Buffalo some of the vessels take 30,000 bushels, and a few even 45,000 bushels. The freight charge is about 12 cents per bushel for every 500 miles; the lake rate from Chicago to Buffalo is about $1\frac{1}{4}$ cents per bushel, elevator transfer rate at Buffalo $\frac{7}{8}$ cent per bushel, canal freight from Buffalo to New York $4\frac{1}{4}$ to $4\frac{1}{2}$ cents, and railway rate 6 cents per bushel. At New York the transfer elevators are capable of dealing with over 450,000 bushels per hour. There are 31 floating elevators, which can be towed alongside any vessel, and 22 fixed elevators, with a total storage capacity of 26,000,000 bushels.

In 1880 there were about 1,782 sailing vessels engaged in the American grain trade, but these are now disappearing. Among 959 vessels now employed, 616 are of British nationality, and 167 German, and 70 Belgian; while only 4 belong to the United States. The largest quantity carried in one cargo was 133,174 bushels. The present tendency is toward large vessels and large railway wagons; the standard being 1,000-bushel wagons, and 100,000-bushel vessels, though the Chicago Board of Trade by-laws specify for sacked grain a normal wagon-load of 400 bushels. During the navigation season very little grain is sent by rail to the seaports.

In the sea-going vessels bound for the United Kingdom, stringent precautions are adopted for the prevention of shifting of the grain during the roughest voyage. "The Merchant Shipping (Carriage of Grain) act 1880" is designed to secure proper "precautions against shifting of grain cargo laden in port in the Mediterranean or Black Sea, or on the coast of North America," under heavy seas or on account of careless loading or other cause. The chief provisions are that, where loose or bulk grain forms more than a certain portion of the vessel's cargo, it shall be divided by longitudinal and transverse partitions or boarding, and properly stowed or trimmed, or that a certain quantity in bags shall overlie the loose grain, so that it is impossible for

any substantial alteration in the center of gravity to be occasioned by any mischance or negligence, so as to affect the stability of the vessel. A vessel of the "whaleback" type was constructed in 1891 at Duluth, and conveyed a cargo of 87,000 bushels of grain from the western end of Lake Superior through the lakes and the rapids of the St. Lawrence, across the ocean to Liverpool. This was the most compact and economical transport vessel yet devised.

For conveyance of grain in bulk by railway, box-wagons are requisite, and are loaded by a spout through an opening in the roof. The usual method adopted for unloading is a power shovel; a large blade or scoop with chain or rope attachments, which, when placed in the mass of grain and drawn toward the door of the wagon, carries the grain before it and shoots it over the receiving hopper. With the Coker-Metcalf Shovel, which is extensively in use for this purpose, one man can unload a 500-bushel wagon in 15 minutes, or two men with a double machine can do the same in 5 minutes.

The wagons are marshaled through the siding to and from the receiving hopper by a "car-puller"—a horizontal capstan, fitted with a friction clutch.



A. E. HARTLEY.

This hauls between 5 and 8 loaded box-wagons. The grain is shot out from the wagons into a hopper in the basement of the granary, which terminates in the "boof" of the elevator or "leg." By this the grain is raised to the upper part of the structure, and there passed through a receiving hopper and weighing machine, whence it gravitates by fixed or flexible spouts to the vessel alongside the building, or to any other car or vehicle, or to the bins in which it is to be stored. In transfer from a vessel to a railway wagon, the grain is raised from the vessel's hold by a "ship elevator" or "marine leg," through the weighing machine as before, and by spouts to the wagon or into the bins. The successful introduction of pneumatic elevators must of necessity effect a considerable simplification and modification of transfer processes.

[TO BE CONTINUED.]

Ora Marlin, who is engaged in farming near Bloomington, Ill., raised corn last season, single ears of which weighed 20 ounces, some of the kernels being nearly an inch long, and 57 ears making a bushel. He paid \$1 for the seed.

In the "American Elevator and Grain Trade" of November referring to the paper presented to the Grain Dealers' National Association by Chas. S. Maguire, his address was given as Columbus, Ohio, instead of Cincinnati, where, as is well known, Maguire & Co. have their headquarters.

A. E. HARTLEY.

A. E. Hartley of Hartley Bros. of Goodland, who was selected from Indiana as a member of the Board of Directors of the Grain Dealers' National Association, was born on his father's farm in Calhoun County, Michigan, April 6, 1864. He obtained an education in the public schools of Michigan, and joined his uncle, C. W. Hartley, in the grain business at Goodland. Feeling the need of a commercial education he attended the Northern Indiana Normal Business College and returned to Goodland in 1885.

After spending over two years with his uncle he took charge of the local grain elevator on the Illinois Central Viaduct at Kankakee City for Searling, Hartley & Co. In 1888 he formed a partnership with his brother H. E. Hartley, and they leased their uncle's elevators at Goodland and Wadena. Later they added the elevators at Remington, Brook, Percy, Mt. Ayr, Morocco and Foresman, and they are now operating all of them except the elevators at Mt. Ayr and Foresman, which were sold.

Mr. Hartley manages the business of six stations, and the firm handles from 500,000 to 2,000,000 bushels of grain annually besides considerable hay and seeds. The business is one of the oldest on the Logansport Division of the Pan Handle.

Mr. Hartley has been working hard to get the dealers of his state to join the Association, and has sent out a number of letters telling of the advantages, so it is certain that he will spare no pains to advance the interests of the organization. Indiana, no doubt, will have a large representation on the membership roll.

DOTS AND DASHES

Join the Grain Dealers' National Association and work for reform.

Wesley Davis, who was formerly in the grain business at Rossville, Ill., has left that place.

Farmers in the vicinity of Chambersburg, Pa., are protesting against the elevator owners because wheat went up only 1 cent while it advanced 9 cents at outside markets.

Do not put off applying for membership in the Grain Dealers' National Association. Sign application blank in the back part of this number and send it to Secretary Chambers.

H. J. Ries of Armstrong, Iowa, writes us: I send herewith \$1 for one year's subscription to the "American Elevator and Grain Trade." I believe that every grain dealer should read it.

It is estimated that on November 15 there were 1,000,000 bushels of wheat in elevators at Tacoma, Wash., for foreign shipment, and about the same amount had been shipped previously.

Begin the new year right. Climb out of the old rut and join with your brother dealers in the work of doing away with unjust practices, as progressive dealers in other lines of business have done and still are doing.

Shippers, don't pay too much for seed. Don't buy any as Prime. Buy it as No. 2 and Rejected. Explain the situation to the farmer and consign his seed for him, if he is not satisfied with the price.—Zahn's Circular.

In Manitoba oats are much higher than they were a year ago, and millstuffs are lower. This is expected to result in a larger demand for millstuffs for feed, and elevator men who grind feed are looking forward to doing some business.

The Minneapolis Grain Receivers' Association held a meeting recently, at which the old officers were re-elected, as follows: President, A. M. Woodward; vice-president, W. G. Nicholls; secretary, W. B. Mohler; treasurer, Howard W. Commons.

Dr. James Craig, William H. McClure, James F. McClure, John I. Tallman, and William A. Thomas, bucket shop men, who pleaded guilty, were fined \$200 each by Judge Grosseup at Chicago recently. Ira Jeffery also pleaded guilty to keeping a bucket shop and was fined \$200.

PUBLICITY OF RAILWAY BILLING BOOKS.

A heated discussion took place on the floor of the Corn Exchange recently, the subject of contention being the custom of the Grand Trunk permitting Tom, Dick and Harry to have access to their delivery book, which, without doubt, gives the name of the consignee and the point of shipment, and some assert that the names of consignors as well are obtainable; but if the latter is not correct, sufficient data are found in this book to obtain them.

Several leading grain and flour men held that the giving of this information concerning the business of the railway company's customers was a flagrant breach of trust: and further contended that the company, being the custodian of goods and the repository of business secrets, should protect these interests in the most sacred manner. It is universally conceded that the law governing common carriers is almost identical with the banking law, the foundation of which is the preservation of business secrets.

What a shock the mercantile community would receive, were it known that the banks gave public access to their books, containing a partial record of their customers' business, the same as the Grand Trunk has been doing for years! The manifest unfairness of the delivery book of the Grand Trunk being open to the scrutiny of everyone is that certain parties outside of the railway company have made it a business to secure this information first, and then peddle it around to certain merchants at \$5 to \$6 a year, thus imparting information to them before their rival consignees know it themselves. This certainly is not strictly railway business.—Trade Bulletin of Montreal.

Several roads in this country have been guilty of the same breach of confidence. They have repeatedly been severely reuked for it, and, of course, promise to correct the abuse. Some have discontinued it, others forget their promise. Dealers are entitled only to information regarding their own grain, and it is a carrier's duty to furnish it.

A RAILROAD VIEW OF THE LIABILITY RELEASE CLAUSE.

Attention is called to a paper printed in this issue which was presented at the meeting of the Grain Dealers' National Association. The subject under discussion was the liability release clause in railroad companies' ground leases, and as will be seen by perusal of the paper, the familiar and time-honored position was taken that railroad companies have no rights which others are bound to respect.

The paper conveys the idea that railroad companies, and not the owners of the elevators built upon their right of way, were the parties chiefly interested in such construction and alone profited thereby, but the writer of the paper, as well as those to whom it was addressed, must have known that in a majority of cases the reverse is true. Grain, contiguous to railroads, will be shipped upon such roads whether elevators for handling the grain are provided or not. It is true that such elevators are a convenience to the railroad, but it is also true that the chief benefits of such elevators accrue to their owners.

The application for a permit to build an elevator comes from the individual, and the railroad in granting such application naturally seeks to protect itself from loss, which is liable to happen because of such construction. The builder of these warehouses fully understands the condition of the contract when he makes it, and it savors of the "baby act" to seek to escape the consequences of his deliberate action. Everyone understands that danger of fire is a natural consequence of proximity to a railroad, and that it is impossible under present conditions to avoid this danger. The absolute spark arrester has not yet been invented, and until such is the case liability of fire is always present; but notwithstanding this fact the courts invariably hold such fires to be the result of negligence.

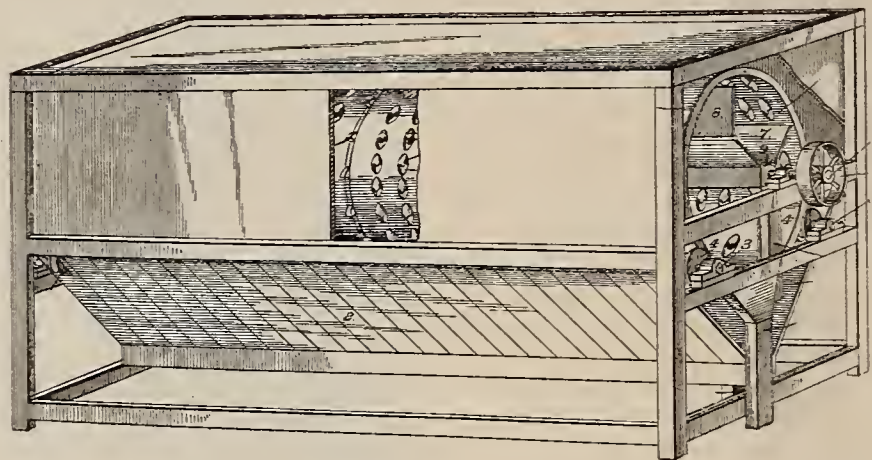
It is manifest, therefore, that the only possible

means of protection left for the railroads is the very contract to which objection is made. The elevator owner can protect himself by means of insurance, but if the railroad were denied the right of contract which now exists, it would be absolutely without power to protect itself from loss. It is always best to be fair. The construction of these elevators is a matter of mutual convenience, and it would seem that if the railroad company, in addition to its nominal charge for ground rent, builds a side track to the warehouse free of charge, as is usually the case, its part of the mutual obligation is fairly discharged.—Railway Review, Chicago.

Our contemporary seems to misunderstand this question completely. The dealers do not desire to deprive the poor rail carriers of any of their rights, but to obtain rights to which they are clearly entitled.

The railroads profit more by the erection of country elevators by private parties than the parties do themselves. The railroads profit first by being relieved of the necessity of providing freight houses for bulk grain as required by their charters. More grain is shipped from every station by reason of the extra facilities provided for receiving, storing and handling by the elevator man, for the farmer is encouraged by these conveniences to haul grain to the elevator at any time.

The elevator is a source of profit to the railroad, in that it attracts grain and makes possible the rapid loading of cars, thereby increasing the earnings of the company's rolling stock. Without country ele-



A RYE SEPARATOR.

vators every carrier of the surplus grain growing territory would have to increase its grain carrying capacity at least 30 per centum. The carriers make more out of the grain traffic than the dealers along their lines make out of the trade in it. The record of grain businesses at country stations during the last few years is a file of failures, and will continue to be so until dealers get together and make a vigorous fight for reform.

The effort to get the release liability clause annulled does not "savor of the baby act." When the dealer accepts it he has no option in the matter. He must do so or no lease will be granted. He accepts it just as he does the unlawful conditions of the hills of lading—under protest.

The elevator man generally attempts to protect himself from the sparks of the carrier's locomotives by insuring his elevator, and for such insurance he pays 50 cents to \$1 more per thousand by reason of the clause in his lease releasing the carrier from all liability for damages to his elevator due to its negligence.

If a few country grain dealers were to burn their elevators and swamp the local freight agents with bulk grain for shipment carriers might come to their senses.

Let them read their charters and the law and learn that they are required to provide depots for freight as well as passengers. They should be ashamed even to suggest that their rights are not respected by the country elevator men. However, they are not, and they will strive to get every advantage possible of the grain shipper as they have done heretofore. As of old, the traffic managers still seem to be of the opinion that the country dealers are a lot of gullible farmers. When they get well organized the carriers will treat them with more respect.

A RYE SEPARATOR.

A machine has been invented by Henry Gschwend of Ontario, Wis., for extracting rye from wheat. He writes that it is a success, although it has not been placed on the market.

The machine is designed to extract rye, oats and chaff from wheat. The illustration given herewith shows the machine with a portion of its case removed. The cylinder has a hand about each end, and these hands run upon the grooved wheels on the longitudinal shafts at the sides. The cylinder is supported on these small wheels and kept in an inclined position.

Inside the cylinder is a hopper arranged longitudinally and provided with a hinged plate or deflector at its upper front side, which may be adjusted to any position. In the bottom of the hopper is a spiral conveyor driven by the pulley shown at the end of the machine. On the opposite end of this conveyor shaft is a sprocket wheel, likewise upon the ends of the shafts bearing the grooved wheels and the shaft of the conveyor in the bottom of the machine. The turning of the conveyor in the central hopper transmits power to the bottom conveyor and to the grooved wheels which support the cylinder. This causes the cylinder to revolve slowly.

The cylinder is constructed of perforated metal. Each of the openings is formed by two indentations of the metal, each indentation being in the opposite direction. The lower indentation on the ascending side of the cylinder forms a small pocket on the

inside of the cylinder, the upper edge of which is provided with a recess. The pocket is of semi-conoidal or triangular shape. The upper indentation on the inner side forms a pocket upon the outer side of the cylinder. This indentation is of the same form as the lower pocket. Its upper end is wider than its lower end where it joins the perforation between the pockets. The upper indentations or pockets serve partly to guide the small seeds and impurities through the perforations and partly to accommodate the oats and rye that may become seated in and elevated by the pockets.

Around the middle of the cylinder is a band bearing a series of teeth or ratchets arranged to engage a spring beater attached to the casing so that it will strike the cylinder light blows on top and dislodge any seeds which may become wedged in the pockets. Three separations are said to be made on wheat fed into the cylinder. Small seeds and impurities pass through the perforations to the hopper below. The larger grains, such as rye and oats, are caught by the pockets, carried up over the deflector hinged to the side of the hopper running through the cylinder, the beater dislodges them and they fall into the interior hopper. It is claimed that wheat, being rounder and plumper, will not be caught by the pockets and will fall over at end of cylinder.

The eastward movement of flour and grain from the West through Buffalo for the month of November shows an increase of 129,128 barrels of flour, and 683,172 bushels of grain. From the opening of navigation to the close of November the lake receipts at Buffalo have been: Flour, 9,325,575 barrels; grain, 154,411,742 bushels. This is an increase over last year of one million barrels of flour and fifty million bushels of grain. The receipts of the grain are the largest in the history of the port.

REPORT OF THE WASHINGTON CHIEF GRAIN INSPECTOR.

Perry W. Lawrence, chief state grain inspector for Washington, in his first biennial report to the governor, just filed, says that from Sept. 11, 1895, to Aug. 31, 1896, the total number of carloads of wheat inspected at the different points on arrival was 8,370, or, approximately, 5,525,000 bushels; total number of carloads of oats, 1,178, or about 800,000 bushels; carloads of barley inspected 369, or about 245,000 bushels; making a grand total of 9,917 carloads, or 6,570,000 bushels.

The total earnings for the same period were \$8,100.11, which, with the legislative appropriation, made a gross sum of \$10,100.11. The total expense in putting the law into effect was \$9,300.68; balance Sept. 1, 1896, \$799.43.

Not the least valuable result of the workings of this department, says the report, is the readiness with which an outside exporter can enter the market of the state with absolute safety as regards fair treatment on weights and grades. A number of cargoes have been bought at Tacoma and Seattle on Washington grades by foreign buyers, which have been loading into the vessels under the supervision of a state inspector, with results mutually satisfactory to both sides of the transaction. The resulting tendency has been to keep the grain market of the state of Washington in closer touch with those of the world, so that an advance in price is felt in our market much earlier than might otherwise be the case. In the judgment of Inspector Lawrence there can be no question as to the beneficial results of the grain inspection law, if wisely and prudently administered.

The inspected receipts from Sept. 10, 1895, to Aug. 31, 1896, at Tacoma included 4,567 carloads of wheat, 470 of oats, and 90 of barley; at Seattle 1,413 of wheat, 690 of oats, and 247 of barley, and at Spokane 2,390 of wheat, 18 of oats, and 32 of barley.

THE LAKESHORE TRANSFER ELEVATOR AT CHICAGO.

Regular grain transfer elevators are slowly but surely displacing the antiquated grain transfer cars, the hill and scoop and the storage elevators in the grain transferring business. A number were built last year, and several have been completed this year. One of the latest additions to the list of transfer elevators in Chicago is the mongrel transfer and storage elevator illustrated herewith. Readers who examine the illustration must not conclude from the cars about it, that it is designed to store or transfer live stock in any form other than grain infesting insects, for it is not.

The house is located at Sixty-sixth and South Park avenue, and was built by a railroad company, but is not operated by it.

The elevator is 160 feet long, 42 feet wide, and 100 feet high. Its foundation is of white oak piling, capped with 12x12 oak timbers. There were 290 piles 25 to 30 feet long driven in clusters to support the oak sills, which run lengthwise and crosswise, and are bolted to the piles.

The first story is frame 14 feet high. Fifty-two posts 10x12 and 12x12 support the house on this floor. They are arranged in clusters of four and five. The cross girders are double 12x12 pine timbers. The cribbing of the 45 bins is 36 feet high and of pine, 2x8 being used in the outside walls and 2x6 in the inside walls. No hemlock was used in the building. The cribbing was spiked with 30-penny spikes 12 inches apart.

The tower is 4 stories high, the first being used for the distributing spouts. On the second floor are four 72,000-pound hopper scales; on the third floor 4 garners of large capacity, and on the top floor are the elevator heads and the line shafting. In the receiving side of the elevator are four stands of elevators, each with an elevating capacity of 6,000 bushels an hour. By means of a clutch each can be stopped independent of the others. The Weller Elevator Buckets are 7x7x18 inches. Three small elevators are used to transfer the grain from the cleaners.

On each side of the elevator is a track, one for receiving and one for shipping. There are four receiving sinks covered with a shed, and four loading spouts equipped with bifurcated spouts made by the Weller Mfg. Co., so that 4 cars can be unloaded, the grain weighed and loaded into four other cars at the same time. On the second floor is a cleaning room 16x133 feet, in which are three largest size S. Howes Oat Clippers, with a capacity for clipping 25,000 to 30,000 bushels in 10 hours. Also in this room is one No. 10 S. Howes Separator. There are bins above and below the cleaners. Dust and dirt is collected in different parts of the house, and drawn by a fan through pipes to Cyclone Dust Collector over the boiler room, from which it drops into the furnace. The house is equipped with 8 pairs of power shovels and a car puller capable of handling 30 loaded cars.

One novel feature of the elevator is the four dormers or extensions of the tower for the elevators. This gives each elevator an independent tower; it also gives the house a lop-sided appearance. It is doubtful if anything is gained by putting the elevators at

MINNESOTA'S SYSTEM OF WEIGHING AND INSPECTING GRAIN.

In his annual report Chief Grain Inspector A. C. Clausen of Minnesota says: The inspection department is under the supervision of a chief inspector, who is appointed by the railroad and warehouse commission, and is divided into four districts, St. Paul, Minnesota, St. Cloud and Duluth, each comprising a district. In each of these districts a chief deputy inspector has direct control of the work and has in charge as many deputies and helpers as the work requires. Each district also has a weighing department in charge of a state weighmaster, with such number of deputy weighmen as he may require.

All appointments are made by or with the approval of the commission. All employees are carefully selected, with due regard to age, character and intelligence and general fitness for the position to which they may be assigned.

Employees are divided into classes in accordance with their length of service, skill and experience.



THE LAKE SHORE TRANSFER ELEVATOR AT CHICAGO.

the side of a narrow house, but the expense is surely greatly increased.

The elevator is lighted by incandescent lamps. Power is transmitted by rope transmission. The main drive rope is a 1 1/4-inch rope, and those driving the legs 1 inch. The power plant which is built close to the elevator is equipped with two boilers 60 inches by 16 feet and an engine 16 1/2 x 27. The building is covered with corrugated iron furnished by the Sykes Steel Roofing Co.

The house has a storage capacity of 150,000 bushels, and a transferring capacity of 120 cars in 10 hours. It was designed and constructed by J. C. Smith, of J. C. Smith & Co., dealers in groceries, crockery, glassware, tinware and notions at Port Huron, Mich.

That a vast majority of the grain dealers of the country are in favor of a national organization there can be no doubt. Neither can there be any question as to its being a power in the grain trade of the future if properly officered and conducted.—Haymaker, Kansas City.

The National Rice Milling Co., an organization composed of several large companies, foresaw a short crop of rice and the advantages of a little corner in that article. So the company sent out buyers early in the season and bought up whole crops in Southwest Louisiana. Now the rice brokers and middlemen are objecting to being shut out of their profits, and prices are expected to soar heavenward.

New employees are placed in subordinate positions and promoted as opportunities offer and their progress in knowledge and usefulness justifies.

The compensation of employees varies in accordance with the importance and responsibility attached to the work in which they are engaged. Removals rarely occur and are made for cause, such as inattention to duty, incompetency, or similar reasons.

The different grades of grain are established in accordance with the provisions of law, on or before the 15th day of September in each year, by the railroad and warehouse commission, after due notice to producers, shippers and others interested, from whom suggestions are invited and carefully considered. Copies of established grades are obtainable upon application.

All grain arriving at terminal points, except such as is billed to points beyond, is subject to state inspection and weighing. On arrival of cars an inspector's helper proceeds to examine the cars for evidence of leakage or bad condition, making a record accordingly. He also records the number of the railroad seals before opening the cars preparatory for inspection. The inspector follows and carefully inspects each car of grain, making a complete record of grade and dockage, and his reasons for the same. After all the cars are thus inspected, the result is reported at the office of the chief deputy inspector, where all persons interested secure their information. The helper is left on track to carefully close each car door and secure the same with a

state seal, the number of which is also made a matter of record.

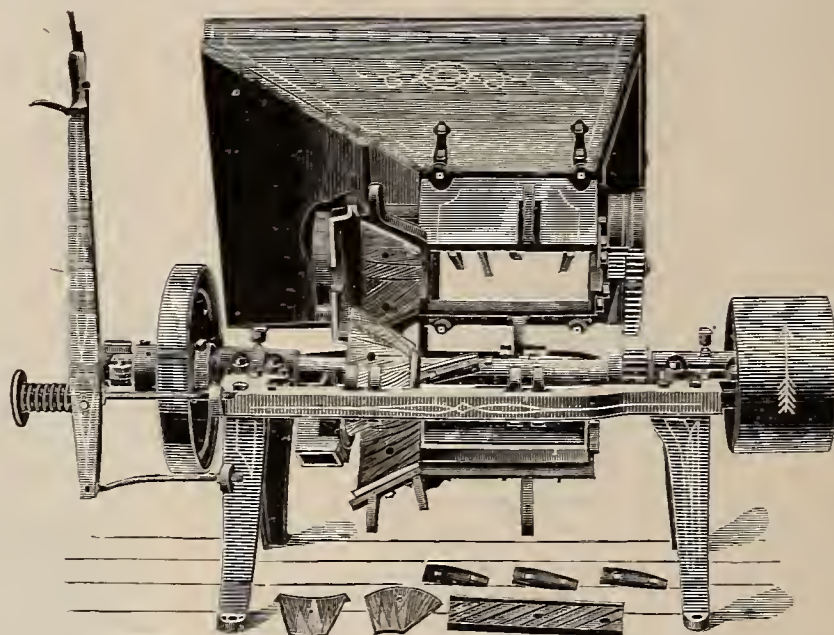
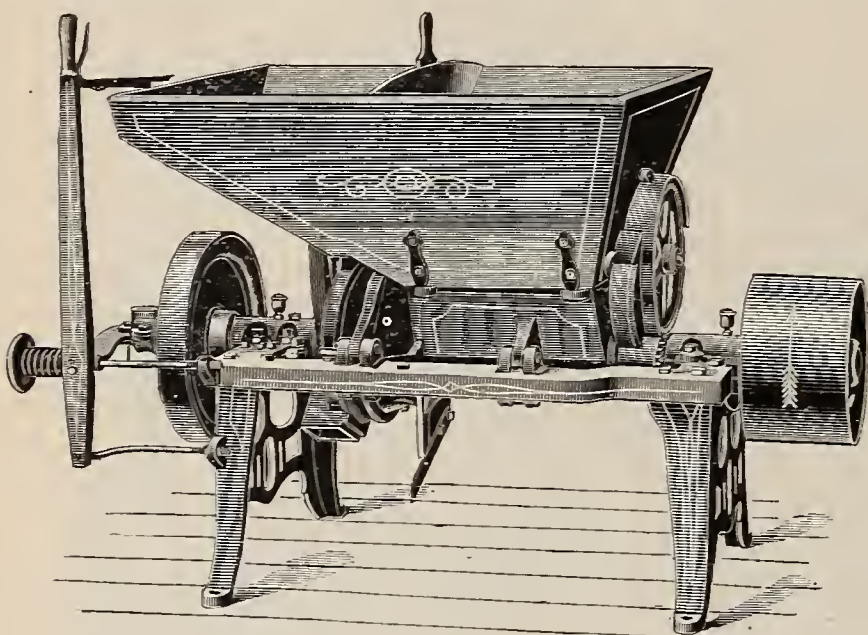
Persons feeling aggrieved at the decision of the inspector in any case may file an order for re-inspection, which is carefully attended to by the chief deputy inspector, and in case of continued dissatisfaction appeal may be made to the railroad and warehouse commission, whose decision is final.

On arrival of a car at final point of destination (elevator, mill or delivery track), it is taken in charge by a state weighmaster, who carefully weighs the contents before delivery and makes his report of all such weighings at the offices of the state weighmaster. Certificates of inspection and weight are furnished upon application, without charge. All scales on which state weighing is done are under the constant supervision of scale experts employed by the department.

Deputy inspectors and weighmen are required to give a bond of \$5,000 conditioned upon a faithful performance of their duties.

BOWSHER'S NEW FEED MILL.

N. P. Bowsher at South Bend, Ind., has now been making feed mills for the past seven years. He began with a 6 horse power size, and has gradually worked around until his line now includes sizes from 2 up to 25 horse power. The two largest sizes



BOWSHER'S NEW FEED MILL.

are comparatively new, and probably but little known to our readers. One of the illustrations shows the No. 10 mill thrown open. The mill can be opened in this manner in two minutes' time, which is a great convenience whenever it is desired to examine the interior. The grinding plates are renewable and every wearing part can be changed without taking the shaft from the journal boxes. The cob crushing is done by spiral steel knives. While all Bowsher Mills are provided with cob crushers, it is claimed that they are none the less perfectly adapted to the grinding of small grain alone.

The Bowsher Mill employs conical shaped grinders, which have been demonstrated to possess important advantages. By keeping the work close to the center of the shaft light running qualities are secured. Provision is also made whereby the mill can run empty without injury to the grinders. The conical shape also practically gets rid of the objectionable end pressure on the step.

All the Bowsher mills have divided hoppers, which makes it practicable to crush ear corn and grind oats, or other small grain, at the same time; mixing the two in any desired proportion, the work being finished at one reduction.

The two new sizes are designed especially for those who want large capacity. The No. 9 size requires 12 to 16 horse power, and the No. 10 size 16 to 25 horse power; the capacity of the No. 9 being 125 bushels of shelled corn per hour, and of the No. 10 mill 175 bushels per hour. On ear corn the No. 9 has capacity of 40 to 80 bushels per hour, and the No. 10 from 50 to 100 bushels per hour.

These mills are provided with "ring-oiling" boxes,

and every other point in their construction is claimed to be in keeping with the reputation the Bowsher factory has earned for turning out nothing but first-class work. The price at which the mills are offered we think puts a good investment within the reach of all. A new circular devoted especially to describing these mills has just been issued, and will be mailed promptly to all who send their address to the manufacturer.

MINNESOTA GRAIN INSPECTION.

A. C. Clausen, Chief Grain Inspector for Minnesota, has issued the eleventh annual report of the department for the crop year ending August 30, from which we take the following:

The total number of carloads of grain inspected "on arrival" at the four terminal points amounted to 250,805 carloads. The inspection "out of store" for the same period was as follows: Wheat, 38,431 carloads, and 46,732,484 bushels into vessels. The total amount of corn, oats, rye, barley and flaxseed was 9,811 carloads, and 13,096,515 bushels into vessels, or a grand total of 47,942 carloads, and 59,828,999 bushels "into vessels" of all kinds of grain inspected "out of store."

As compared with the volume of business transacted during any previous season in the history of the department, that of the past year is unsurpassed.

In the endeavor to properly and justly classify wheat which has been damaged from any cause, the department naturally encounters more or less difficulty and criticism. This is particularly true of frosted and smutty wheat. The former is bought sparingly by millers, and our grades on this class of wheat are scrutinized very closely; in most cases purchases are made by sample and grades cut a secondary figure. Smutty wheat, until a year ago, was tabooed by the trade both at home and abroad. Northwestern millers, however, with their usual energy and progressive spirit, have discovered and put into operation a mechanical device for the purpose of washing wheat which is tainted with smut and bringing it into prime condition for milling. This is accomplished at a comparatively small expense per bushel, and the benefits accruing to the farmer are seen in the advanced prices for this class of grain in our home markets. Smutty wheat, however, is not at all acceptable to Eastern buyers and millers, and they decline to use it except at a great discount, so that at present the market for this class of grain is practically confined to Northwestern territory.

The amount of revenue received during the year for inspection service was \$124,949.30; for weighing service, \$115,110.27; interest on deposits and incidental earnings, \$1,883.30, or a total revenue of \$241,942.87. The disbursements during the same period

The nearest approach to it was the season of 1891-92, during which 221,546 carloads of grain were inspected "on arrival," and 68,634 carloads and 45,133,184 bushels "out of store."

The number of carloads inspected "on arrival" were as follows:

Crop of	No. Cars Wheat.	No. Cars Corn.	No. Cars Oats.	No. Cars Rye.	No. Cars B'rl'y	Cars Flax-seed.	Total Cars.
1885.....	93,561	1,148	1,543	5	652	744	97,653
1886.....	113,980	1,777	3,505	21	374	673	120,335
1887.....	116,096	2,893	2,878	26	1,079	880	123,852
1888.....	75,734	6,185	2,795	55	1,800	909	87,478
1889.....	108,227	13,060	7,220	87	761	1,299	130,654
1890.....	117,141	4,401	6,413	403	1,643	2,681	132,673
1891.....	200,081	5,663	6,362	649	3,129	5,662	221,546
1892.....	168,137	4,873	5,796	691	4,195	2,653	186,345
1893.....	133,628	9,939	5,056	446	4,110	2,901	156,080
1894.....	135,505	1,774	6,837	779	4,017	2,844	151,756
1895.....	210,917	3,006	12,752	2,676	7,463	13,981	250,805

The wheat crop of the past season, like several others which preceded it, had its blemishes. In all sections of the wheat area of the Northwest there were incidental troubles with smut, while some portions of the extreme Northern or hard wheat belt suffered considerably in addition from early frost. The result is shown in the reduced percentage of the No. 1 Hard grade, as compared with more favorable years. On the whole, however, the crop averaged well in quality with that of the year previous.

Of the total number of cars of wheat received 15,770 cars, or 7½ per cent., inspected as No. 1 Hard, as against 5½ per cent. the preceding year; 125,531 cars, or 59½ per cent., graded No. 1 Northern, as against 67½ per cent.; 37,510 cars, or 18 per cent., No. 2 Northern, as against 13 per cent.; 32,001 cars, or 15 per cent., below No. 2 Northern, as against 14 per cent. last year.

were \$174,808.24; leaving a net gain for the year of \$67,134.03. The balance on hand from last season was \$1,794.97, making a net balance on hand at the close of the season covered by this report of \$68,929.20.

DOCKAGE OF UNCLEANED WHEAT.

Out of 210,917 carloads of wheat inspected at St. Paul, St. Cloud, Minneapolis and Duluth, 195,451 cars were subjected to dockage on account of the foreign matter contained therein. Seventy-two thousand and seventy-five carloads were docked one-half pound per bushel, 79,680 one pound, 28,146 one and one-half pounds, 10,314 two pounds, 2,383 two and one-half pounds, 1,753 three pounds, and 1,100 over three pounds per bushel, and at an average of four pounds.

There were received 15,466 cars on which no dockage was placed. Of these 3,110 contained wheat which had been suitably cleaned at interior points before shipment, and 12,356 cars contained grain of a low grade or "sample" grain, which is always sold on its merits, and on which no dockage was imposed.

At St. Paul the average dockage for the season was 17 ounces per bushel, at St. Cloud 17½ ounces, at Minneapolis 16 ounces, and at Duluth 15½ ounces per bushel. The slight variations in dockage between the several points can be ascribed largely to differences in quality and condition of wheat tributary to each market. The net average dockage at all points was 15¾ ounces per bushel.

REINSPECTION AND APPEALS.

Out of a total of 298,747 carloads of grain inspected "into" and "out of" store there were 15,229 calls for reinspection; in 8,935 cases the original in-

spection was sustained. In 5,567 cases the grade was raised, in 233 cases the grade was lowered, and in 494 cases the dockage was changed. Appeals from the decisions in these reinspections were made to the railroad and warehouse commission in but 17 cases, in 10 of which the decisions of the chief deputy inspector were changed, and sustained in 7 cases. The number of errors made in the inspection work of the past year, as indicated by the changes above stated, was 6,311, or at the rate of one error in 41 cars inspected. Considering the character of a considerable portion of the crop and the difficulties encountered in consequence, the above showing may justly be regarded as favorable.

THE DEPARTMENT FORCE.

The average number of employees engaged in all branches of the department during the season was 148, classified as follows: One chief inspector, 4 chief deputy inspectors, 2 first assistant deputies, 16 deputies, 6 subdeputies, 2 flax inspectors, 5 assistant flax inspectors, and 20 helpers in the inspection department; in the weighing department, 4 state weighmasters, 68 deputy weighmen, and 2 scale experts; in the registration department, 1 warehouse registrar, and 2 assistant registrars. The clerical force in all departments consists of 11 clerks and 3 stenographers. There is also 1 supervisor of country elevators. The number of persons employed during the year ranged from 130 to 158, the force being largest during the heavy movement of grain in the fall months, and curtailed when the rush of business was over.

One feature of our work which has attracted attention and given great satisfaction to grain shippers, receivers and the railroad companies is rapid service. However large the receipts may be, the inspection is promptly performed each morning, and all reported at the general offices before 11 o'clock a. m. This permits sale and disposition on day of arrival, early remittances to country shippers, rapid return of empty cars to country points, and prevents expensive demurrage charges.

We feel warranted in asserting that in this respect the record of the department is not surpassed, if equaled, by any similar department in the country. Our relations with the producers and with all branches of the trade have been unusually pleasant and satisfactory during the past season. Criticism and complaint have almost entirely disappeared.

STATE SEALING.

The sealing system is in successful operation at St. Paul, Minneapolis and Duluth. That this measure of safety and protection for grain lying in railroad yards at terminal points awaiting disposition is practical and in a large measure efficacious admits of no question. Complaints of pilfering by track thieves have been reduced to a gratifying extent. A careful examination and report of the condition of each car is made prior to the inspection of its contents, which frequently proves valuable in determining the cause of reported shortages. The reports from the three inspection districts show that but a slight percentage of cars arrive in bad condition, as compared with the whole number received. At Minneapolis out of a total of 134,868 cars which were inspected, 414 doors were found without seals, 242 cars in leaky condition, 471 open end doors, and 111 open side doors. At Duluth out of a total of 113,638 cars, there were 165 doors without seals, 4 cars in leaky condition, 9 open end doors, and 17 open side doors. At St Paul out of 1,269 cars there were 64 doors without seals, 1 leak, 1 open end door, and 74 open side doors.

THE COUNTRY WAREHOUSE LAW.

Chapter 28, laws of 1893, commonly known as the "Country Warehouse Law," at the time of its enactment, was regarded by many as merely experimental legislation and of somewhat doubtful utility. Three years of operation and experience under its provisions have satisfied its opponents generally that it was a wise, beneficial and needed legislation. This branch of the work is under the charge of Mr. R. C. Burdick, who was the first chief inspector of grain in this state, and whose many years of experience in the operation of country elevators, as well as at terminal points, renders his

services in this connection of the greatest value. His duties are to see that all country elevators on the right of way of railroads at interior points which come within the purview of the law are duly licensed and operated in accordance with its requirements and provisions. In the discharge of such duties he spends a portion of his time visiting country elevators, observing their methods, comparing grades and dockages with those at terminal points and investigating causes of specific complaint which may have been formally lodged with the railroad and warehouse commission. The result is seen in a closer conformity by country buyers to the standards in force at terminal points, and generally improved methods. The relations between the farmer and country buyer are characterized by an absence of much of the antagonism and suspicion which formerly existed. Whenever any doubt exists as to the proper grade of any lot of grain at country points either or both parties interested are at liberty to submit a sample of the grain to the chief inspector at St. Paul, who determines what such grain would grade at terminal points, and who thus acts as an arbiter or adviser in the settlement of disputes at country stations. During the past season many controversies have been adjusted by this method. The total number of



EDWIN BARBER.

country elevators and warehouses in this state at present operating under the law is 1,133. In connection with this branch of the service and in accordance with the requirements of chapter 30, laws of 1893, there is constantly kept on file for public inspection market journals showing prices of grain and farm products in Liverpool, London, New York, Buffalo, San Francisco, Minneapolis and Duluth. Weekly bulletins are issued and published in leading Northwestern papers showing the prices paid in the different markets; also the rates of freight by lake, rail or ocean, and all other charges which would attach to shipments from the Northwestern markets to the seaboard and abroad.

A REVIEW OF DEPARTMENT WORK.

In the foregoing general review of the past year's work, it will be seen that this branch of state administration is charged with important duties and increasing responsibilities. Its business has assumed large proportions. It necessitates careful, methodical management in the selection of employees, and in the discharge of its various duties. Its support being derived from fees contributed solely by those who are benefited by the services performed, it is in no sense a tax upon the general public, but self-sustaining. As an illustration of its development, in 1885, the year of its inception, there were but 54 persons employed, while at the present time there are 145. The annual receipts of grain have increased during the same period from 97,653 carloads to 250,805 carloads; its annual earnings from \$63,471.29 to \$241,942.87; its expenditures

from \$62,184.90 to \$174,808.24. During the same period the average cost to the owner of grain for the combined service of inspection and weighing has decreased from 1½ mills per bushel to ⅔ of a mill per bushel.

At the commencement of the work in 1885, selections for the various positions in the department were made from the best men available. Many of the inspectors, being equipped only with local experience, found themselves frequently in a quandary when confronted with grain of different varieties from sections with which they were not familiar. Frequent errors and considerable dissatisfaction resulted. It became apparent that if the new system was to be of any practical utility it must be conducted upon some other basis than chance appointments. The remedy was clear, and was found in a system of classification of employees, a careful course of training and education, to be followed by promotion as an incentive to faithful, conscientious work. In the year 1889, on assuming charge of the department, I ventured to lay these views before the railroad and warehouse commission, and found a ready acquiescence and approval in the plan proposed. Since that time, the work has been conducted upon this basis, and whatever degree of improvement and success it may have attained is due, in my judgment, almost wholly to the methods pursued. The department is now practically on a civil service basis. Its usefulness to the public was never before so heartily acknowledged and recognized. The several governors who have administered the affairs of the state during this period of its evolution have, without exception, conceded the necessity for such a system, and have not attempted to urge new appointments which could have been given only by displacing trained public servants, whose services were indispensable to the successful operation of the department.

DEATH OF EDWIN BARBER.

Edwin Barber, one of the best known men in the grain trade of Minneapolis, Minn., died Friday, November 27, at the age of 35 years.

Mr. Barber was born in Brooklyn, N. Y., on July 23, 1861. He went to Minneapolis 15 years ago, and since then was associated with milling and elevator concerns. He first became connected with the Washburn-Crosby Co., with whom he remained about eight years, and then accepted a position with the Pillsbury-Washburn Co. He then became identified with the Minneapolis and Northern Elevator Co., and later with the Pillsbury Company, for whom he purchased most of the company's grain on 'Change. He proved himself one of the best posted men in the trade, known for his clear judgment and understanding of the market.

Mr. Barber married Miss Robinson in 1885, and his wife and one child survive him. He had suffered from consumption for nearly two years, and a year ago sought other climates for better health. He returned to Minneapolis a few months ago much improved in health, but began to fail again. Mr. Barber's short life was a busy one, and his warm heart and sterling qualities will be remembered by many friends.

M. Ammerman, grain dealer of Perry, Iowa, recently made a trip to Mexico, and while there closed a contract with the Mexican government to deliver within the next eight months 150,000 bushels or more of corn. The grain is now being shelled and shipped on this contract at the rate of twenty cars a week. The experiment is being watched with interest.

Fred P. Rush & Co. have brought suit at Indianapolis, Ind., against a manufacturing company to recover damages for an alleged fraudulent sale. It is alleged that the plaintiffs purchased from defendants a mill for grinding cobs on the representation of defendants that it would grind 1,500 pounds an hour; that the mill was shipped to Newman, Ill., and placed in the plaintiffs' elevator, when it was found that the mill would grind only 160 pounds an hour. The plaintiffs paid \$435 for the mill. Judgment for \$2,000 is asked to cover cost of erecting mill and damages.

ODE TO OWEN MOORE.

Owen Moore he went away,
The very smart bucket shop man;
Owen Moore than he could pay
To hay-seedy dupes who tried his plan.
Owen Moore came back again,
Owen Moore, still Owen Moore,
And sold and bought hypothecated grain,
Till all his customers got very sore.
Owen Moore.

COMMUNICATED

[We invite correspondence from everyone in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

WILL JOIN.

Editor American Elevator and Grain Trade:—I think that a Grain Dealers' National Association would be a grand thing, and I should like to join it.

Yours truly, C. W. SMITTLE.
Grand Junction, Iowa.

A GOOD THING.

Editor American Elevator and Grain Trade:—A Grain Dealers' National Association would be a good thing, and it meets our hearty approval. We inclose \$1 for the "American Elevator and Grain Trade" for one year.

Yours very truly, WEIMER & SON.
Rosewood, Ohio.

WILL BECOME A MEMBER.

Editor American Elevator and Grain Trade:—The account of the organization of the Grain Dealers' National Association in the "American Elevator and Grain Trade" I found very interesting. Please have my name enrolled as a member of the Association.

Yours truly, D. G. STEWART.
Pittsburg, Pa.

DESIRES TO JOIN.

Editor American Elevator and Grain Trade:—I see by the "American Elevator and Grain Trade" that the grain dealers are organizing a Grain Dealers' National Association. I think it is a good idea, and I want to become a member of the Association. I have been in the grain business for ten years, and try to deal on the square. I am willing and ready to pay the membership fee if I am accepted. I own my own house and everything pertaining thereto. I furnish my own capital, and have no debts, and also furnish the capital for Bedell & Co. of Bancroft, Iowa.

Yours truly, J. A. WINKEL.
Bancroft, Iowa.

SHIPPING AT TACOMA.

Editor American Elevator and Grain Trade:—According to the report of the harbor-master of the port of Tacoma, Wash., for the eleven months of 1896 to December 1, the total exportation of bread-stuffs was as follows: Wheat, 2,545,589 bushels, valued at \$1,673,367; flour, 303,438 barrels, valued at \$904,559.77. The inward registered tonnage was 533,532, inward cargoes 70,294 tons; outward registered tonnage 565,649, outward cargoes 585,607 tons. Deep sea arrivals 393, departures 374.

SAMUEL COLLYER,
Secretary Chamber of Commerce.
Tacoma, Wash.

MARYLAND BUYERS ORGANIZE.

Editor American Elevator and Grain Trade:—The grain dealers and millers of Washington County, Maryland, recently organized for the purpose of protecting and assisting one another in the buying of grain and selling flour and feed. Some good has already been accomplished, and at a meeting held November 24 some very good resolutions were adopted, which will strengthen the grain buyers and be of assistance to them in their dealings in the future. Heretofore, when a farmer wished to sell wheat he would first go to one grain dealer or miller, and then to another for bids on his grain, thereby getting them to outbid each other. The farmer would often get 2 or 3 cents, and even 5 cents, more than his grain was worth. But now, since we are organized, when the farmer has the price of one buyer he has the price of all of them, as we agree

upon one established price. B. A. Betts of Chewsville is President of the Association; Elias Emmert, Hagerstown, Vice-President, and H. E. Heard, Secretary and Treasurer.

Respectfully, H. V. TROVINGER.
Chewsville, Md.

SOUNDS THE KEY-NOTE.

Editor American Elevator and Grain Trade:—I find the November number of the "American Elevator and Grain Trade" interesting reading. Mr. Utt's suggestion of lower rates to elevator men than to transient shippers touches the keynote of our present difficulties. It is a fact that the granger shipper very often receives more attention and better facilities from the railroads than the regular shippers.

Yours, M. McSWINEY.
Dawson, Neb.

WILL STAMP INVOICES OF GRAIN.

Editor American Elevator and Grain Trade:—We are having a stamp made, and expect to stamp every invoice on grain we send to regular markets as follows:

"These carloads of grain are owned by members of the Grain Dealers' National Association, and if any shortage in weights occurs complaint will probably be made through this Association. It has been weighed carefully at home, and in justice to ourselves we would advise careful weighing at your end, as members will discontinue shipments to elevators or warehouses where weights are complained of through different shippers.

"E. R. ULRICH & SON."
This stamp will be about 1½x4 inches in size.
Yours truly, E. R. ULRICH & SON.
Springfield, Ill.

CORN INSPECTION AT BALTIMORE.

Editor American Elevator and Grain Trade:—I send you herewith copy of a statement from a reliable grain firm regarding the inspection of corn in Baltimore, Md., during the month of November, 1896.

We would like to call the attention of the trade to the amount of low grades of corn going into the Canton Elevator compared with the amount of low grades going into the B. & O. Elevators. We understand that all off grades going into the Canton Elevator are settled for by one firm, giving them an opportunity almost to fix their own discounts on off grades.

We lost about \$1,200 last summer by discounts on off grades at this Canton Elevator.

INSPECTIONS IN BALTIMORE, MD., FOR NOV., 1896. AT THE CANTON AND B. & O. ELEVATORS.

	Old Mixed.	New Mixed.	Steamer.	No. 2 White.	No. 3 Corn.	Rejected.	Total.
B. & O. Elevator.....	1,168	128	64	60	16	5	1,441
Canton Elevator.....	1,571	43	139	199	62	69	2,083

Yours very truly,
E. R. ULRICH & SON.
Springfield, Ill.

PLENTY OF INDUCEMENTS TO JOIN NATIONAL ASSOCIATION.

Editor American Elevator and Grain Trade:—All legitimate grain dealers should now join the National Association. If they plead lack of inducement we merely have to point out the subjects of fire insurance, public weights, railroad claims, legislation, etc. Any one of these matters could be made of much benefit to the trade.

I predict that an insurance company will yet be organized for the country grain dealers, that will do them much good. As for the matter of public weights at terminals, the weights have been improved at Chicago by the Illinois Grain Dealers' Association alone. What three or four times as many dealers could do at Chicago and other points can readily be seen. A bureau or an extra clerk in the Secretary's office could do the trade in general a great deal of good in adjusting differences between grain shippers and railroads. An association with a good, large membership ought to be, and doubtless would be, listened to and have influence with the Interstate Commerce Commission in matters of importance that might be taken to them.

I am fully convinced that the country grain deal-

ers are entitled to a rental for elevators and facilities that they provide and maintain for handling the grain business the year around, and I hope to see our organization prosper and get strong enough to bring this about. I hope that considerable progress will be made at the directors' meeting in Chicago December 15 in the way of a policy to be followed.

Very truly, M. McFARLIN.
Des Moines, Iowa.

DESIRES TO JOIN.

Editor American Elevator and Grain Trade:—We have read with much interest the proceedings of the meeting for the organization of the Grain Dealers' National Association held in Chicago a short time since. After reading the constitution and by-laws, we are somewhat in the dark as to whether commission men are eligible to membership. We do not see any of the Eastern grain firms represented at the meeting. We would like to know if we would be eligible to membership in the Association; if so we would like our application considered.

The movement is a good one, and no doubt will result in the general good of its members. We do not suppose it is the intention of the gentlemen forming this Association to exclude Eastern grain merchants. We feel that the grain dealers of the West and East should be in close touch with each other.

Yours truly, E. L. ROGERS & CO.
Philadelphia, Pa.

MR. CARR GIVES ADVICE.

Editor American Elevator and Grain Trade:—I want to call the attention of your readers to a reading advertisement which the "Farmer's Friend" recently published in a paper called the Chicago Commercial Journal. It is as follows:

ADVICE TO FARMERS.**HOW TO MARKET THEIR CROPS TO BEST ADVANTAGE.**

[Special to the Chicago Journal by H. H. Carr & Co., Chicago Board of Trade.]

The millers of Illinois are in session at Springfield. The grocers' associations of Illinois, Missouri, Iowa, Kentucky and Nebraska are in convention at St. Louis. What do they want? They are looking out for their own interests.

These associations furnish farmers a valuable lesson. The producers must look out for themselves. They cannot gather in conventions representing a whole state or a half dozen states. The time may soon come when they will make railroads and Congress listen by doing this very thing. At present the work of improving farmers' profits must be worked through individuals and through local neighborhoods. For five years there has been a campaign of education going on. The Farmer Commission house has reached a million farmers with advice on direct shipments. About 1,000 farmers have been independent enough to say: "I will ship my grain to the Chicago market and get all there is in it." Another thousand have written for advice about farmers' shipments. Ten thousand others are talking about the plan of direct shipments.

The seed is sown. The idea is spreading. The middlemen (country grain buyers) are organizing as never before to fight farmers' shipments. What does this mean to farmers? Is there money worth fighting for in grain shipments? Who is better entitled to such profits than the men who raise the grain? Millers fight for their rights. Grocers fight for their rights. Laborers in cities are organized to secure fair pay for their services.

Farmers have more money invested than all these classes. They endure more hardships. They run more risks of weather and insects and wet harvests. Yet when their work is all done they divide profits with the man at the home station. Farmers have heads on their shoulders—they can ship what they raise to Chicago, and get the prices the world will pay in an open market. It is the only intelligent way to market grain. What the country shipper usually gets will pay taxes and lift farm mortgages.

I do not know of any country grain buyer who has maligned Mr. Carr, and I do not understand why he should think it necessary to undermine them in order to get business. Suppose they should send out circulars to the farmers of their district pointing out Mr. Carr's large expense account for traveling, printing, dumps, etc.? Suppose they called attention to the pages of advertising he has carried in the farmer's journals and should ask the farmer whether or not they were willing to contribute to such an expense fund? Would the farmers be shrewd enough to discern that the country buyers were prompted solely by selfishness? Many of them, and especially

the more intelligent, would understand that they could not afford to heed the advice, and I feel confident that this is the way many of them feel about Mr. Carr's advice.

Respectfully, L. T. CHASE.

AN OFFICIAL CAR TAG FOR MEMBERS.

Editor American Elevator and Grain Trade:—I am more than pleased with the success of the movement to organize a Grain Dealers' National Association, and I sincerely hope that it will soon have a large membership.

I recently saw what I consider a splendid plan for helping the Association to be of benefit to members. An invoice of grain shipped by E. R. Ulrich & Son of Springfield, Ill., had stamped across the face a statement to the effect that the shippers were members of the Grain Dealers' National Association. If the Association would take up this matter and supply 100 white cards about the size of a No. 6 envelope, with a similar statement printed upon it, members could tack one on each side door of every car loaded, and thereby increase the chances of having the grain weighed correctly. It is the elevator men and the weighmen shippers must reach to have the shortage abuse remedied.

value to the Association and its members, and I trust the Board of Directors will take up the proposition and consider it. It would also be well to adopt an Association trademark to be used by members on their stationery.

Very truly, F. C. CHARLES.

THE SHORTAGE ABUSE SHOULD BE REMEDIED.

Editor American Elevator and Grain Trade:—It seems to me that parties who are regularly engaged in the grain business are standing in their own light when they hesitate about joining our Grain Dealers' National Association. They cannot by any other means have the protection that our members have against the irregularity of outside scalpers and scoop-shovelers, dishonesty in weights, uncommercial conduct in repudiating trades, unfair inspections, unjust rates of freight, shortages in weights and almost the whole category of ills with which the country elevator man is troubled. What does the paltry sum of the membership fee and the annual dues amount to in a thing of this kind when compared to the protection derived?

We have never invested one dollar in anything of this kind but that it net us hundreds of dollars, and

because they were not run on a business plan. I think the officers of our Association understand what is expected of them, and with the cooperation of all its members it should do a great deal of good.

"I think it would be a good plan for every member of all the associations to have a copy of your address on shortages. The secretaries of the different organizations could make complaints when shortages occurred, and the Eastern houses would attach more importance to them than if made to the shipper individually. I notice that Mr. Utt has extended an invitation to the Directors of the National Association to hold the Association's next meeting in Omaha. I am in hope they will accept the invitation. And I hope the Association will be the means of benefiting the dealers."

What we want to do is to follow this line up at once and act. We country shippers now pay one-half the weighing charges in Chicago, which we notice is 25 cents per car for our part. We would not be afraid to guarantee that this stealing could be stopped, and stopped at once, in Chicago and other cities by our national and different state organizations, by paying our own representatives to work in Chicago, as I have suggested, instead of paying John Walker's men. According to the official reports there were 188,487 cars of different kinds of grain shipped to Chicago during the year beginning Aug. 1, 1894, and ending Aug. 1, 1895, at 25 cents per car. Weighing amounts to \$47,036.75. Now, to hire two competent men to act, as suggested in the paper read before the National Association, would not cost the trade, say, over \$3,500 to \$4,000 per year to keep going from one elevator to another, as suggested. We are positive it would save in shortages or stealages at least \$350,000 to \$500,000 per annum to the shippers of the West. And this should also be followed up in all the other markets. It would be self-supporting and country shippers would not pay out as much as at present. No doubt the Chicago Board of Trade officials and the officials of the different markets would be glad to aid us in this reformation as soon as it was brought to their notice. The main trouble with our organizations is that hitherto they have been too slow about acting. Your different state organizations and the directors of the national organization should take this matter up quickly and act promptly. Strike while the iron is hot.

There are too many drones in the country grain business who are satisfied to let others put their shoulders to the wheel, while they sit quietly by and watch the performances, and gather their share of the fruits. Every country grain dealer regularly engaged in the trade should be a member of the state and national organizations, and aid in one way if they cannot in another.

Yours truly, E. R. ULRICH & SON.
Springfield, Ill.

NORTHWEST WHEAT SUPPLY.

Estimates of the amount remaining in the hand of farmers for sale, above the amount required by country mills, vary from 20,000,000 to 35,000,000 bushels. If the smallest estimate is correct, then the total northwest crop and reserves brought forward were 133,000,000 bushels. If the largest is right they were 148,000,000 bushels, but in either case exceeding the usual estimates of crop and reserves at harvest time. The more careful estimates then put the new crop at about 120,000,000 bushels and old reserves at some 20,000,000, making 140,000,000 for distribution, which even now seems to be about what may be expected, and would leave yet in the hand of farmers to sell, for terminal shipment, 27,000,000 bushels.—Minneapolis Market Record.

The National Grange recently adopted a resolution declaring that it does not and never had indorsed what is known as the Lubin proposition to pay an export bounty on agricultural products.

It used to cost about \$300 to line a vessel with lumber to transport wheat, but recently a vessel at Portland, Ore., was lined throughout, including ballast logs to keep her level, for \$150. The amount of lumber required was 27,000 feet.

PRESIDENT,
E. S. GREENLEAF,
JACKSONVILLE, ILL.

SECRETARY,
W. H. CHAMBERS,
HEPBURN, IOWA.
DEC. 15, 1896.

Official Car Tag of the

Grain Dealers' National Association.

*This car was loaded with _____ by J. N. Jones, of
Cairo, Ill., who is a member of the Grain Dealers' National
Association. It contains _____ pounds.
Please weigh carefully.*

AN OFFICIAL CAR TAG FOR MEMBERS.

There would be no objection to inclosing one of the cards, properly filled in, with the bill of lading and sending to the receiver or buyer. It would serve to advertise the Association and extend its influence as well as prompt the receiver to guard the shippers' interests more carefully.

I suggest that the Association do the printing and supply each member with 100 copies free, so as to initiate them to its advantages without cost or labor, and thereby increase the chances of securing its extensive use in a short time. If after using 100 of the Association's official car tags any member should desire to use more of them, he could obtain them of the Secretary, with his own name printed on them for less than he could have them printed elsewhere. In each case the name should be plainly printed.

There are several things to be gained by giving the Association control of the distribution of such tags.

The cards would all be alike and bear a plain statement of fact. No threats or prophesies would be included. Nothing would be used under the cloak of the Association which did not have its approval. The conservative statements of the official tag would command respect. The uniformity of cards would prove that all emanated from the same source, and would strengthen each one. A variety of cards and of statements would convince many that it was a hoax, and they would not heed it.

By getting many at the same place they could be purchased much cheaper.

None but members in good standing should be permitted to use the tags, and by giving the Secretary only power to issue them their use would be confined to such members.

The idea is a splendid one. It can be made of much

we think this has been the experience of all other grain dealers who have gone into the proper kind of associations. So we would advise all regular grain dealers throughout the country to take advantage of it at once and not to wait, as they cannot get the benefits that can be obtained unless they do join. They should send their names to W. H. Chambers, Secretary, Hepburn, Iowa, but they should be sure they are regular before applying. When members have grievances of any kind which are referred to in our constitution and by-laws, they should give a detailed account of them to our Secretary, and he will take the matter up properly and promptly, and he will be heartily aided by all our members.

Our Mr. E. R. Ulrich Jr. recently received an interesting letter from Geo. W. Lowrey of Lincoln, Neb., in regard to the question of short weights. As it may be interesting to other dealers we give extracts from it, as follows:

"I have read the account of the meeting of the Grain Dealers' National Association, and am very much interested in it, especially in your address on 'Shortages in Shipments at Terminals; a Remedy.' Undoubtedly every grain dealer has had the same experience you have had. If a plan could be devised to stop this shortage in weights, or stealing of grain, as it could be more properly called, it would be of more benefit to the trade than anything I know of.

"Our Nebraska Grain Dealers' Association is getting nicely started. I am informed that about 85 per cent. of the dealers of the state have either joined or have signified their intention of joining. We have had several organizations within the past few years, but they have not been successful, simply



William Werder will erect a brewery at Ashland, Wis.

Sick & Hieber, brewers of Trail, B. C., assigned recently.

Haverty & Son, brewers of Vernon, B. C., have assigned.

Joseph A. Hudson of Casanova, Wis., has erected a brewery.

E. F. Williams is erecting a brewery at Little Chute, Wis.

Henry Zelt has succeeded C. P. Corlett, brewer of Washington, Pa.

Geo. D. Flynn has completed a new brewery at Fall River, Mass.

The Old Colony Brewery Co. has a new brewery at Fall River, Mass.

Charles Rahr Jr., brewer of Oshkosh, Wis., will remodel his brewery.

The Lehigh Brewing Co. of Allentown, Pa., is erecting a large brewery.

The St. Louis Brewing Co. of Ellensburg, Wash., has erected a malt house.

The Star Brewing Co. has completed its new brewery at Boston, Mass.

The Kollmer Brewing Co. of Peoria, Ill., will erect a new brewery at that place.

The Obermann Brewery and Bottling Co. has been organized at Milwaukee, Wis.

The Consumers' Brewery Co. of Norfolk, Va., has erected a brewery at that place.

William Rugg has succeeded the estate of John Rutishauer, brewer of Scales, Cal.

Reiger & Gretz are to build an addition to their brewing plant at Philadelphia, Pa.

The Highland Brewing Co.'s plant at Springfield, Mass., is to be increased in capacity.

Improvements will be made to the Muessel Brewing Co.'s brewery at South Bend, Ind.

The Kooteuay Brewing, Malting & Distilling Co. has been incorporated at Roseland, B. C.

Jacob Knaublauch, of the West Bay City Brewing Co., West Bay City, Mich., died recently.

The Chattanooga Brewing Co. will enlarge its plant at Chattanooga, Tenn., at a cost of \$30,000.

Martin Blum has completed improvements to his brewery at Galena, Ill., at a cost of \$25,000.

John Kazmaier has succeeded Charles Rabenschlag in the brewing business at Altoona, Pa.

The Howman Brewing Co. has been incorporated at Chicago, Ill., with a capital stock of \$50,000.

The Consumers' Brewing Co. of St. Louis, Mo., is now operating its new brewery at that place.

The Anchor Brewing Co. has been incorporated at Pittsburg, Pa., by John C. Wellinger and others.

The Mt. Clemens Brewing Co. of Mt. Clemens, Mich., will improve its plant at a cost of \$10,000.

The East Tennessee Brewing and Malting Co. will erect a 50,000-barrel brewery at Knoxville, Tenn.

An addition to John A. Lengel's brewery at Wilmington, Del., is to be erected at a cost of \$10,000.

A. Wintter & Co., brewers of Bridgeport, Conn., will erect an addition to their plant to cost \$11,000.

The Wyandotte Brewing Co. has been incorporated at Wyandotte, Mich., with a capital stock of \$40,000.

Burglars entered the office of the Star Brewing Co. at Cleveland, Ohio, on November 10, and after

overpowering the watchman, blew open the safe and stole \$5,000, besides \$1,500 in rare coins.

John Frostburg has succeeded to the brewing and bottling business of Franz X. Haser at Thurlow, Pa.

John Miller & Son has purchased the business and plant of the McCormick Brewing Co. of Boston, Mass.

The brewery at Lander, Wyo., was reopened November 1, after having been closed for several years.

J. Peacock & Son, brewers of Rockford, Ill., intend to enlarge and improve their brewery at a cost of \$30,000.

The Chris. Heurich Brewing Co.'s new brewery at Washington, D. C., has been completed and is in operation.

The West Bay City Brewing Co.'s plant at West Bay City, Mich., sustained damages by fire recently amounting to \$30,000.

Henry Flach, of the firm of Henry Flach & Son, brewers of Philadelphia, Pa., died November 13, aged 61 years.

Dewald & Co. have organized to carry on the brewing business of Dewald, Wuesthoff & Co. at Pittsburg, Pa.

Martin E. Claus, secretary of the Claus Lipsius Brewing Co. of Brooklyn, N. Y., died November 14 at the age of 29.

The Schmich Bros'. Brewing Co. has been incorporated at Chicago with a capital stock of \$100,000, to manufacture beer.

F. A. Loeble of Philadelphia has bought of John S. Hipple the brewery at Coshocton, Pa., formerly belonging to L. Rieger.

Additions will be erected and improvements made to the Sioux Falls Brewing Co.'s plant at Sioux Falls, S. D., to cost \$150,000.

The Roxbury Brewing Co. was recently incorporated at Roxbury, Boston, Mass., and is erecting a brewery at that place.

Mr. Sieben's new brewing plant at Chicago, which is to have a capacity of 30,000 barrels, and will cost \$75,000, is well under way.

The West Bay City Brewing Co.'s brewery at West Bay City, Mich., was destroyed by fire November 13. Loss \$15,000; partially insured.

The George J. Stadler Brewing Co. has been incorporated at Chicago with a capital stock of \$50,000, by George J. Stadler and others.

The Kraus-Merkel Malting Co. of Milwaukee, Wis., intends to remodel its malt house in South Water street to a grain elevator at a cost of \$5,000.

P. Ballantine & Sons, brewers of Newark, N. J., are having a 500,000-bushel malting plant erected at that place on the Saladin-Prinz pneumatic system.

The firm of Stehlin & Breikopf, brewers of Brooklyn, N. Y., has been dissolved, and Breikopf & Trommer have formed a partnership to continue the business.

The Capital Brewing Co., which owns and operates a new brewing plant at Tumwater, Wash., has been incorporated at Olympia with a capital stock of \$75,000.

In the Province of Ontario the acreage of barley in 1895 was 478,046 acres, the yield 12,090,507 bushels (25.3 bushels per acre), and the value of the crop \$4,884,565, as compared with 486,261 acres, 10,980,404

bushels (22.6 bushels per acre), and a value of \$4,447,064 for the year 1894.

United States capitalists are going to erect a brewery at Maisonneuve, Ont., where they are offered a bonus of \$10,000 and exemption from taxes for 20 years.

The Consumer's Brewing Co., which was recently incorporated at Utica, N. Y., has purchased and remodeled the Lafayette Brewing Co.'s plant, which it is operating.

John M. Moser has been appointed receiver for the firm of Philip Schaefer & Son, brewers of New York City. The assets are estimated at \$100,000, liabilities \$178,000.

Johann Valentin Schorr, formerly brewmaster of the Chas. G. Stifel Brewing Co., St. Louis, and the head of a family of well-known brewers, died recently, at the age of 75 years.

Julius Becker recently brought suit against the Kraus-Merkel Malting Co. for injuries received while employed by that company, and has been awarded damages of \$10,500.

Hofmann Bros., of the Brewer & Hofmann Brewing Co., Chicago, are erecting a brewing plant at 1107-15 West Monroe street, to cost \$16,000. It will have a capacity of 60,000 barrels.

August Krueger of Tell City, Ind., has purchased the Breidenbach brewery at Owensboro, Ky. The brewery has been idle for several years, but is now being operated by Mr. Krueger, repairs having been made to the machinery.

The malt house of the Serkind brewery, owned and operated by the Davenport Malting Co., Davenport, Iowa, was destroyed by fire November 14. The house was the largest in the city, and the loss was only partially covered by insurance. It will be rebuilt at once.

Hermann Stier of Cincinnati, Ohio, has patented a malting apparatus, one-half of the interest in which he has assigned to Albert Schwill & Co. of the same place. The apparatus consists of the combination of an outer perforated drum and an inner perforated drum adapted to revolve together, the inner drum having an irregular or star-shaped cross-section, whereby it is adapted to turn over the grain falling thereon and thoroughly mix and distribute the same as the two drums revolve.

The Brand, Bullen & Gund Co. has been incorporated at Chicago with a capital stock of \$300,000, and will succeed to the well-known firm of the A. F. Bullen Malting Co. Mr. Bullen, who is one of the oldest maltsters in the West, will operate the house on Cedar Street, Chicago, until the close of the season, when it will be torn down. A 1,000,000-bushel plant is being erected on the Pan Handle tracks at Rockwell and Twelfth streets, on the Saladin-Prinz system, part of which will be a 500,000-bushel elevator. The Steel Storage & Elevator Construction Co. writes us that it has the contract for this house, which will be a steel tank storage elevator.

The New Jersey Station has experimented upon the use of dried brewers' grains in place of oats for work horses with very favorable results. When used instead of oats, pound for pound, in a mixed feed with bran and corn, they gave quite as good results as oats. The value of wet brewers' grains for milch cows has been almost universally recognized, the chief objection to their use being the readiness with which they ferment and decay, and the danger of thus introducing undesirable ferments into the milk. These objectionable features are, of course, absent from the dried grains, while direct experiments, also made at the New Jersey Station, have shown that they are practically just as valuable for milk as are the wet grains.

An important suit was begun in the United States Court at Indianapolis, Ind., December 1. The suit is brought by the Cerealine Manufacturing Company of North Indianapolis through Joseph Gent against Hervey Bates and the Indianapolis Hominy Mills. The Cerealine Company claims to be the exclusive owner of a patent right for the manufacture of cereal flakes. The patent is of special value owing to the fact that it is used largely in preparing grain for brewing purposes. The defendants in the case

claim that the patent claimed by the claimant is not a valid one and they are fighting the suit on that score. However the case may be decided it will affect a considerable number of companies throughout the country which are in the same relative position as the hominy company.

PRODUCTION OF BARLEY.*

The Department of Agriculture reports the production, acreage and value of barley grown in the United States, 1866 to 1895, as follows:

Calendar Year.	Production, Bushels.	Area, Acres.	Value.	Average value per bushel, Cents.
1866.....	11,283,807	492,532	\$11,383,698	100.9
1867.....	25,727,000	1,131,217	22,850,130	88.8
1868.....	22,896,100	937,498	29,809,931	130.2
1869.....	28,652,200	1,025,795	23,387,909	81.6
1870.....	26,295,400	1,108,924	22,244,584	84.6
1871.....	26,718,500	1,177,735	21,541,777	80.6
1872.....	26,846,400	1,397,082	19,837,773	73.9
1873.....	32,044,491	1,387,106	23,333,329	91.5
1874.....	32,552,500	1,580,626	29,983,769	92.1
1875.....	36,908,600	1,789,902	29,952,082	81.2
1876.....	38,710,500	1,766,511	25,735,110	66.5
1877.....	34,441,400	1,614,654	22,028,644	64.0
1878.....	42,245,630	1,790,400	24,483,315	58.0
1879.....	40,283,100	1,680,700	23,714,444	58.9
1880.....	45,165,346	1,843,329	30,090,742	66.6
1881.....	41,161,330	1,967,510	33,862,513	82.3
1882.....	48,953,926	2,272,103	30,768,015	62.9
1883.....	50,136,097	2,379,009	29,420,423	58.7
1884.....	61,203,000	2,608,818	29,779,170	48.7
1885.....	58,360,000	2,729,359	32,867,696	56.3
1886.....	59,428,000	2,652,957	31,840,510	53.6
1887.....	56,812,000	2,901,953	29,464,390	51.9
1888.....	63,884,000	2,996,382	37,672,032	59.0
1889.....	69,869,495	3,220,371	28,729,386	41.1
1894.....	61,400,465	3,170,602	27,134,127	44.2
1895.....	87,072,744	3,299,973	29,312,413	33.7

* No estimate of crop prepared by U. S. Department of Agriculture for 1889 to 1892.

QUERIES: AND: REPLIES

[Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.]

No. 8. Inspection at Chicago.

Will someone please answer these questions for me? Is all grain received at Chicago inspected by the state grain inspector? Is inspection compulsory? Has the owner any option in the matter?—CORN SHIPPER.

No. 9. Shortages at a Chicago Elevator.

I have recently had serious shortages on wheat handled through Central Elevator "A" at Chicago. What is the reputation of this elevator? Can anyone furnish me any information bearing on the subject?—NEBRASKA SHIPPER.

No. 10. Chicago Winter Storage.

Will you please inform me what is the rate at present for winter storage on grain in Chicago, and at what time said storage commences and terminates?—T. L. RODGERS, Pittsburg, Pa. [Ans.—Winter storage of grain in Chicago elevators was abolished Aug. 13, 1894. The rate was made for the period during which navigation was closed; practically from December to April.]

No. 11. Standard Sealed Measures.

Of whom can we purchase a standard sealed half bushel measure? W. M. Co. [Ans.—Standard sealed measures are generally sold in sets, and may be obtained usually of scale manufacturers. Whether a single measure could be obtained from a set, we do not know. Those whom we have seen declined to break a set, as the sets are quite costly, running from \$25 to \$60 in price. If any of our readers can give our querist any information we shall be pleased.]

No. 12. The Largest Elevator.

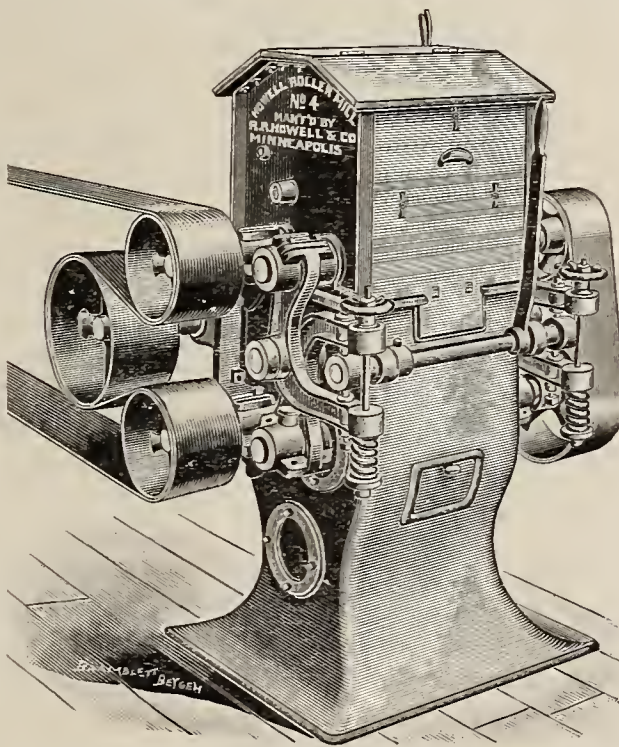
Will you inform me where the largest elevator in the world is located, also its capacity, and the capacity of five or six of the largest elevators in the United States?—C. E. M. [Ans.—Starr & Co.'s big wheat warehouse at Wheatport, Cal., is credited with a storage capacity of 3,300,000 bushels. Possibly it might not be considered as strictly an elevator. Armour Elevator "B" Annex, and Armour Elevator "D," with annex, are each officially credited with 3,000,000 bushels' capacity. The "B" Annex alone has this capacity, Elevator "B" proper having 1,250,000 bushels' capacity. The Union Elevator at

Chicago has 2,000,000 bushels' capacity. Globe Elevator 2 and 3 at West Superior are each credited with 2,000,000 bushels. At Minneapolis the Union has 2,300,000, and the Star 2,250,000 bushels. The New York Central Elevator at New York has 2,300,000 bushels. Dow's stores 2,500,000; Beard's stores 2,700,000 bushels. These are the figures given in official publications.]

THE HOWELL ROLLER FEED MILL.

A feed mill designed to meet the demands of the country elevator man is the Howell Four Roller Feed Mill illustrated herewith. The manufacturers claim that this mill runs noiselessly, requires but little power, is easily managed and perfectly reliable in all its work.

The Howell Mill has two pairs of rolls, one pair being located above the other. Two of the rolls are stationary. The two movable rolls are supported on swinging journal blocks on a heavy shaft extending through the frame of the mill having an eccentric on each end which is used to throw the rolls apart by means of a lever attached to the shaft. Adjusting screws prevent the rolls from running together when empty. Should any foreign substance pass through the rolls they will spread apart and



return to working position again, with no injury or strain to the machine. The working tension of the pressure spring can be continually maintained as desired.

The rolls may be spread apart when occasion demands by the simple movement of a lever, the rolls of both pairs being thrown apart at one movement. A reverse movement of the lever throws the rolls together again to their previous setting. The rolls are easily adjusted to suit the feed to be ground. The mill is driven by straight belts, giving the longest possible wear to the belts. The method of driving the fast rolls is shown in the cut. The slow rolls are driven at the side of the mill opposite to the one shown, by a belt from a countershaft with a small handwheel to tighten or loosen the belt, as desired.

The manufacturers call attention to the reliability of the Howell Mill for doing the heaviest work, its great capacity and cool, even, clean grinding. For feeding material to the rolls a fluted feeding device is used, with which any kind of material is said to be fed perfectly. The feeder can be stopped or started by a single movement of a lever. The material to be ground is fed to the first pair of rolls, and after being ground the material is discharged to the second pair, where it is ground again and discharged at the bottom of the mill.

The Howell Four Roller Feed Mill is manufactured by R. R. Howell & Co. of Minneapolis, Minn., who will give any desired information regarding it.

Help yourself by joining the Grain Dealers' National Association. Do it to-day.

..Points and Figures..

G. M. and R. Osgoodby entered pleas of guilty on a charge of using the mails to defraud before Judge Grosscup at Chicago, recently. The Osgoodbys were conductors of the Monon Seed Company.

Whenever a firm or corporation advertises to return ten cent. per month to investors, it might be well to consider whether such good opportunities are generally given away.—Trade Bulletin, Chicago.

Cellulose is being made from the pith of corn-stalks, taking the place of cork in ship building, and it is said that the demand for cellulose is so great that a good many factories will soon be engaged in making it.

D. A. Robinson, the well-known elevator builder of Chicago, recently brought suit in the United States Court at Minneapolis, against the Republic Elevator Co. of that place for \$1,000 damages for alleged infringements of certain patents owned by him.

The Union Pacific and the O. R. & N. Co. announce a reduction on corn and oats of 12 cents per hundred from Missouri River points to points on the Pacific Coast, the rates now being 60 cents; from St. Louis and Mississippi River points 77 cents; from Chicago and common points 80 cents.

The Kansas City, Pittsburg & Gulf Railroad, the new road which will probably carry a good deal of grain to Southern ports, is expected to be in operation by next April. The terminus will be Port Arthur, on Sabine River, where extensive elevator and dock facilities will be established.

A number of prominent western grain dealers, including H. A. Duff of Syracuse, Neb., F. M. Baker, of Greenleaf & Baker, Atchison, Kan., F. L. Harris of Omaha, and Denton of Leavenworth, met at Chicago December 2, conferring regarding plans for bettering conditions in the grain business in their territory.

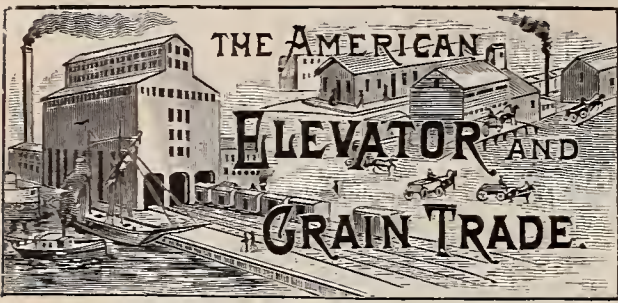
A farmer went to Champaign recently with a load of oats. He fed his horses one peck; went into a saloon, where he drank and treated three bushels; then into a restaurant, where he ate six bushels; then smoked two bushels; but the remainder he bet on Tanner and made 150 bushels.—Pantagraph, Bloomington, Ill.

One of the weighmasters employed by the Board of Trade of Superior, Wis., when the attempt was made to maintain Wisconsin inspection a short time ago, has brought suit against the Board for his month's salary, \$50. Defendant alleges that the salary was to be paid only provided the fees from the weighing of grain amounted to that much, which they did not.

Jones & Whitlock, grain dealers and millers of Hastings, Minn., have brought two suits in the district court against the Erie & Western Transportation Company to recover \$1,308.81 and \$1,110.97, respectively, on two shipments of flour sent to Liverpool via Milwaukee and the defendant's line of boats to Lake Erie ports. It is alleged the flour was destroyed by fire.

In one week over 70 cars of corn were received in Boston, Mass., in bad condition from heating. Of course this caused great loss to the shippers, one car, for example, selling for half the amount of the freight charges. Most of the corn was from Ohio, and it gave the Ohio product a black eye among New England buyers. As all experienced grain men certainly know when corn is not fit to be shipped, it can only be presumed that they were willing to run this risk.

Frank P. Torrence of Springfield, Ohio, recently began suit against the Central Stock and Grain Exchange of Chicago for \$1,345. He alleges that he paid it \$20 on 1,000 bushels of wheat at the rate of 79 cents per bushel, to be delivered at a future day. He says the Exchange failed to deliver it, and he sues for \$200, and also \$500 exemplary damages, which are allowed by state laws against gaming. In the second cause for action he says that H. M. Brooks invested \$625 in the concern, and that Brooks has assigned his claim to him.



PUBLISHED ON THE FIFTEENTH OF EACH MONTH BY

MITCHELL BROS. COMPANY

(INCORPORATED.)

OFFICE:

Howland Block, 184 and 186 Dearborn St.,
CHICAGO, ILL.

A. J. MITCHELL, - - - Business Manager
HARLEY B. MITCHELL, - - - Editor.
CHARLES S. CLARK, - - - Assistant Editor.

Subscription Price, - - - \$1.00 per Year.
English and Foreign Subscription, - - - 1.50 " "

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., DECEMBER 15, 1896.

JOINING THE NATIONAL ASSOCIATION.

Some regular country dealers, and, too, some of the very ones who declared in favor of organizing a grain dealers' national association, have so far refused to join the association, and to help to do the work which they thought and declared was necessary for the relief of the trade. A few of these have with a grace that ill becomes them held aloof and promised to join later in case it proves a success. If, when the armies of the late war were being organized, any man gave such an excuse for not lending his support he was considered a traitor to his own interests.

No regular dealer can afford to hang back and wait for others to win the battle, with the expectation of participating in the victory. Only remarkable nearsightedness can prompt them to indulge in any such selfish hopes. To merit relief from any of the burdens which now encumber their business, they must join with the others and enter earnestly into the work for reform.

A great many have promised to join soon, evidently failing to see that by procrastinating they greatly retard the work of the Association. Now is the accepted time to act, and the dealer who joins promptly renders twice the assistance to the cause that is given to it by the laggard who hangs back until the last moment.

The remedying or amelioration of any one of the abuses from which the regular grain dealer suffers is worthy of his best energies, and if he desires relief, as surely every one of them does, he should enter heartily into the work, and with a firm determination to make it a success. Delay may result in the loss of the cause.

If you have a business that is worth anything it is certainly worth protecting and advancing.

Both can be accomplished by joining this movement now and by inducing others to join. It takes work and money to accomplish anything that is worth doing at all, but of course if the regular dealer does not consider his business worth saving, he is justified in permitting it to continue to settle in the quagmire of depression; otherwise, he should join to-day.

THE NATIONAL GRANARIES SCHEME.

Along with the proposal by some of the conservative leaders in England to impose a duty of five per cent. on imported wheat, comes the old familiar proposition to establish a system of national warehouses for the storage of wheat as a reserve for the British people in case of foreign war and blockade. The member of Parliament for Chester formulates the plan this time. He proposes that the government build forty granaries, each divided into 150 silos. The silos will be 100 feet high and 15 feet across and built of brick or concrete, with suitable arrangements for elevating, airing and cleaning the grain. The capital outlay is figured at \$107,500,000, and the annual cost of storage about \$1,500,000. The scheme contemplates a reserve of about 80,000,000 bushels of wheat.

Of course the scheme is not impracticable. It only needs money to carry it out, and Great Britain has the money. But the British fear of starvation in case of war will hardly, we think, proceed to the length of the government's going permanently into the grain business at enormous cost, for that is what the scheme means. Of course Great Britain might be blockaded; but a glance at the navies of the world would hardly indicate that such a thing is among the probabilities for many years. Nevertheless, the fear of the thing seems to dominate a great many of our British cousins and it is the father of this warehouse scheme. Incidentally, the agriculturists are its god-fathers.

SHORTAGES AT ST. LOUIS.

Regular country grain shippers have complained of the shortages at St. Louis so long with no apparent effect upon the thieves, that many of them are exasperated, and rightly so. One Southern Illinois dealer said recently that out of over 1,000 cars of oats he had shipped to St. Louis not one car was less than twenty bushels short. Others have had similar experiences and now avoid that market as much as possible.

The weights or guesses on weight of grain unloaded on the team tracks of that city are also short of the shipper's weights, yet the receivers have made no effort to have the trouble remedied. Unlike other prominent primary grain markets of the country, St. Louis has no team scales in their team track yards, and the teamster who hauls the grain from the car to the store of the local dealer probably finds it impossible to resist the temptation to take some of the grain to his own barn or to sell it to a neighbor. He is supposed to get all the grain weighed and to deliver it with the weigh-tickets to the local dealer, but he does not do it.

The local dealer settles with the receiver according to the amounts stated in the weigh-tickets and the receiver notifies his shipper that the car only contained so much. When the same

practice was in vogue in Chicago teamsters were frequently detected in stealing, and doubtless teamsters anywhere else will yield when subjected to the same temptations. The Chicago receivers have not done much for the trade in the way of reforms, but they did compel the railroads to put team scales and weighmen in their yards and the elevator men to put public weighmen in charge of their scales. They did this in the interests of the market, and have thereby materially reduced the shortages. St. Louis receivers can surely do as much if they will. If they won't, then the Grain Dealers' National Association should ignore them and take up the work of reform in weighing in that market on its own hook.

AN INTERNATIONAL WHEAT TRUST.

From semi-official sources the information is conveyed to the public that the Russian legation at Washington approached our government on the subject of international control of wheat prices. The scheme, as outlined, was that the wheat exporting countries should unite and fix a price for wheat to be maintained uniformly through seasons of overproduction, when farmers would get the benefit of the fixed price, and through seasons of poor crops, when the consumer would reap a like benefit. It is said that the communication on this subject was handed by the State Department to Secretary Morton for reply. Anybody who knows the Secretary's views on paternalism can imagine his reply. Nevertheless we imagine there was a vast difference between his oral comment and his courteous official communication.

That Russia should propose a plan of this sort is not surprising, for that government has already embarked in the business of loaning money on grain. But this country could not well enter upon such a plan without going counter to all American ideas on the subject of government. To make the idea practicable a government like ours would be compelled to go into the grain business and buy all the wheat offered at a fixed price and sell at another fixed price. It would have its choice of doing this or of regulating the production and sale of wheat and denying the right of private contract. Anything short of absolute control of the market would defeat the purpose in view. The government would have to be prepared to take care of the increased production of wheat (which would be stimulated by the fixing of a sure, even, though moderate, price) or forbid the people raising more than a given amount.

But while the regulation of the wheat supply at home would present innumerable obstacles, these would not equal those which the nations outside of the trust would place in its way. Were a really remunerative price fixed for wheat, nations which now import would go into the business of raising wheat for themselves. Were the price unremunerative, farmers in wheat-growing countries, knowing that scarcity would cut no figure and that the price could not advance in any event, would cease producing wheat. In the former contingency, the nations producing wheat would load their governments down with it, and it is a perishable commodity; while in the latter, the governments in the wheat trust would engage to feed the im-

porting nations at less than cost. To make the trust at all feasible, constitutional government must first become a thing of the past; and even then that would only insure the supply. The market would be another matter entirely.

Scarcely less feasible is the plan suggested by the Mark Lane Express that a central chamber be established by wheat-producing countries which would advise producers when to withhold and when to sell their wheat. The plan requires no infraction on liberty and would be unobjectionable on that score. But its advisory character would render it actually harmful to the producer. Should it advise farmers to sell, for instance, prices would plunge to the bottom at once; while its advice to hold would not control a wheat producer's necessities.

Regulating the price of an article of almost world-wide production as well as of world-wide consumption, is a pretty big job. Doubtless a few trials would convince the regulators that natural laws have something to do with it; and that the man or government who gets in the way of one of these laws might as well get ready to be run over.

CONDITION OF AMERICAN AGRICULTURE.

The fourth annual report of the present Secretary of Agriculture has received any amount of adverse criticism along with a fair share of praise. The point upon which opinion divides is the view he takes of the present condition of the American farmer. The critics aver that he is blinded to the facts of low prices and agricultural despondency, while the others praise his discernment in appreciating the fact that the farmer occupies a position of advantage over the ordinary business man.

It is quite possible that Secretary Morton is a trifle optimistic; but there are facts in his report which certainly may be cited in disproof of the common assertions of agricultural pessimists. For instance, there is a popular impression that about all the farmers in the country are mortgaged up to the eyes. As a matter of fact, 72 per cent. of the farms of the United States are occupied by their owners, free from mortgages or other encumbrances. Out of every 1,000 farmers, but 282 are mortgaged and three-fourths of the money represented by the mortgages is for the purchase of the farms or for money to improve them. Another fact brought out in the report is that farms in the West and South (perhaps with the exception of some localities), are no more heavily burdened than farms in the East and Northeast. New Jersey, in fact, has the largest farm indebtedness in proportion to valuations, of all the states. The figures given certainly do not tend to show that the farmers are universally in debt nor despondent.

In the matter of competition the report calls attention to the fact that in the past thirty years 2,000,000 farms of 80 acres each have been given away by the general government, under the Homestead act and 550,000 more farms of the same size under the timber culture law. The addition of this enormous amount to the productive area of the country naturally hardened the conditions in the older states, where farming has been carried on with high-priced land. This competition among our own people has, of course, tended to regulate itself as the free land

became exhausted. But so long as it lasts it is hardly to be expected that land which is costly in the older states can compete with land which costs the owner nothing.

Our agricultural exports for the last fiscal year reached \$570,000,000, an increase of \$17,000,000 over the preceding year. This is a gratifying figure as to bulk, though the export prices were not as remunerative as they should have been. Considering the disadvantages and competition from within and without, under which the American farmer has labored, his present status is good, especially when we compare it with that of other classes in our own country or with farmers abroad. The American farmer is not a pauper, nor in danger of becoming one; and no one ever accused him of being a slave.

THE NATIONAL AND THE LOCAL ASSOCIATIONS.

A grain dealer, who evidently is not familiar with the grain trade of the country and with the needs that are common to all the trade, has, with guileless earnestness, expressed himself as being in doubt as to the room for local, state and national associations of grain dealers. If he were familiar with only a few of the many trade abuses which can and should be abolished he would readily see the need of, as well as the room for, the different associations.

The local associations can handle local affairs, such as overbidding, running out irregular and tricky transient buyers or scoop-shovel men, and keeping one another informed regarding these illegitimate buyers and tricky farmers who rent and sell grain that does not belong to them, better than a state or a national association can do it.

The state associations should properly confine their work to their respective states and seek to protect and to advance the interests only of regular dealers doing business in the state. If it works for state legislation on insurance, crop liens, inspection weighing or equitable freight rates as it must do if it strives to serve the interests of the state dealers, it will necessarily spend money contributed by outside dealers in the promotion of work whereby they will not profit. Surely dealers outside the state would not long contribute to a work which brought them no benefits, neither would they be interested in the success of the National Association if it undertook state work. When work of national importance is undertaken by a state association, it unjustly throws all the expense of that work, which will prove profitable to every member of the trade, upon a few progressive dealers of one state. Such an inequitable condition of affairs will prove discouraging to the workers and weaken the organization for the work which properly belongs to it.

The care of grain, inspection, weighing and storing and fees for same at terminal markets, freight rates, elevator rentals from railroads, reciprocal demurrage, clean bills of lading, uniform classification and uniform bills of lading, national legislation, patent right suits, extortionate insurance charges, unjust treatment by telephone, telegraph or railroad companies, tricky receivers or buyers guilty of uncommercial conduct and other matters of importance to regular dealers in all parts of the country should be handled by a national association, so that the ex-

pense can be borne equally by those who will profit by the success of the work.

THE PRICE OF CORN.

It is refreshing to find one who takes an optimistic view of corn-raising. The tone of the agricultural press has been despondent for so long a time that such an article as Mr. John M. Stahl writes to the Country Gentleman is timely. While a writer of ability, Mr. Stahl is also a farmer; and what is more to the point, he acts upon his optimism; he is not one of the kind who cheerfully tells others that the sun is rising and then prudently lights his own lantern.

The gist of Mr. Stahl's article is the considerations that impelled him to buy 115 acres of Illinois corn land. Knowing the land, its productiveness, the share of the crop for which the land could be rented and similar matters, the chief consideration was the price of corn. Probably if Mr. Stahl had taken prices for the past six or seven months he would not have made the purchase. But with the correct axiom that the only way to judge of the future is by the past, he studied over the prices of grain for the last fifty years or more. He gives them in his article; the prices at Chicago published by the Aldrich Committee in 1893 in its report to the Senate.

Without quoting these prices in full, which are doubtless familiar to the reader, he found that the average price of corn in Chicago for the decade from 1840 to 1849 was 33 cents; from 1850 to 1859, 46 cents; from 1860 to 1869, 43 cents; from 1870 to 1879, 42 cents; from 1880 to 1889, 45 cents, and from 1890 to 1895, 44 cents. With the reduction in cost of cultivation and cost of transportation, Mr. Stahl concludes that farmers get more for their corn in Illinois now than they did thirty years ago. The present low price of corn does not disturb Mr. Stahl. The average price in 1846 was 25 cents; in 1862, 23 cents, and in some other years not much better. It takes a philosopher or a good business man to buy when prices are low and sell when prices are high; but if human experience counts for anything, this is a winning policy and Mr. Stahl is entitled to be considered one or both.

Illinois was once by far the largest producer of corn. Of late years, however, Iowa, Nebraska, Missouri and Kansas have disputed the championship belt with her. Nevertheless, Illinois still produces a tidy bit of the golden corn. This year the yield is figured at 288,650,000 bushels from an area of 6,900,000 acres or an average yield of 42 bushels per acre. This is a larger yield per acre than in the banner year, 1879, when the state yielded 305,000,000 bushels on 7,900,000 acres, or 38 bushels per acre.

A farmers' paper gives quite a humorous account of the way in which misguided people fought insect pests in the middle ages. Prayers, religious processions and judicial proceedings in court appear to have been the favorite means of antagonizing the grasshoppers and similar insect plagues. Of course this seems very funny and our farming contemporary grows merry over anathemas pronounced on the pests of the fields. And it does seem rather queer to us in this age. But after all, judging from results, was not that treatment about as successful as modern scientific treatment has been?

EDITORIAL MENTION

Cut out and sign the constitution on the last page of this number.

The directors of the Grain Dealers' National Association are holding a meeting in this city to-day.

A number of grain dealers had a meeting at Council Bluffs, Ia., December 4. Newspaper reporters were barred and consequently they are still making wild speculations regarding the object of the meeting.

Cook County has a new state's attorney, and once more the public is assured that the cases against the bucket shops will be speedily tried, the matter pushed, etc., etc., etc., as it was in the beginning, is now and ever shall be.

The Chicago Underwriters' Association has notified elevator owners that rates will be increased one per cent. if brimstone is used in bleaching oats. And thus the secrets of traffic are divulged by the heartless insurance companies.

Illinois corn shippers had so much trouble in the New Orleans market that a committee from the state association finally visited that city and has made a report on its visit, but unfortunately we are unable to give it to our readers in this number.

Judge Tuley has not yet rendered his decision in the Chicago elevator cases, but it is the general impression that the time is near at hand when the elevator men will have doubts as to their right to deal in grain stored in their own elevators.

Irwin, Green & Co. of this city got judgment in Cincinnati on December 8 against E. L. Harper for \$671,860. This sum represents the claim of the firm against Harper at the time of his failure, when trying to run his famous corner in Chicago.

The steamers that were chartered to carry grain from the Pacific coast to India appear to have been pursued by bad luck. Three of them have been overtaken by disaster. One of them had to put in at Yokohama after burning part of her wheat cargo for fuel.

The privilege of reconsigning grain at Kansas City, is said to have been discontinued by the Western Freight Association. If so it will materially reduce the average stocks at that point. Some of the grain usually stored there could be retained at country points, but most of it would be sent to other markets.

The paying of the insurance on the Pacific Elevators at Chicago, which burned October 27, developed ill-feeling among some of the Chicago insurance men. It seems that some of the companies paid their losses as soon as the insurance was adjusted without making any discount. Just where the criminal or unbusiness-like feature of this proceeding came in we fail to

see. But some of the agents said it was a low-down trick. It is hard for plain people to understand the ethics of some trades and professions.

Secretary Morton took a parting shot at the seed distribution business in his final report. Of course it won't do any good, except to keep up the fire on the senseless expenditure of public money in such channels until the Congressional conscience gets educated.

Failures in the grain trade abroad are not so common as they are here. But we notice that when one does occur it is apt to reach proportions of importance. Thus at Berlin a few days ago Otto Heynman, a well-known grain dealer, failed for over 3,000,000 marks.

Some grain dealers who have tried selling corn husks without success have finally decided to dock corn not husked clean one to two cents a bushel. This is discouraging to the rapid huskers, but is made necessary by losses on husks paid for at corn prices heretofore.

The Implement Trade Journal suggests "Corn and Wood Yard" as an appropriate sign for the Western dealers who formerly handled coal for fuel. If memory serves us rightly, the burning of corn for fuel has generally been followed in the near future by an increase in the price.

And now the Chicago bucketshop pursuers are talking of having the Western Union Telegraph Co. indicted for aiding and abetting bucketshop keepers in illegal speculations. Evidently they are determined to shut up the shark shops which bring discredit upon the entire grain trade.

Judge Grosscup, in the Federal Court in Chicago, made short work of the Monon Seed Co., one of the swindling affairs that the postoffice people have been after. He gave G. M. Os-goodby, the chief culprit, a fine of \$500 and a year's imprisonment in the Milwaukee House of Correction.

The decision of the United States Supreme Court in the Elmwood elevator case, a digest of which appears in this number, will be published in full in our next number. The court was unanimous in its decision against the farmers, who sought an order requiring the railroad company to grant them a site for an elevator.

The newspapers have published many columns about the changes made in the rules governing the cleaning and grinding of grain in transit by the Western Freight Association. The chairman of the Association thinks the revision of the rules will be completed in about six weeks, at which time he will know something about them.

Mr. Edward Atkinson gives some figures that show the immense development of the ten central, Northern and Western states in the past thirty years. These states are Ohio, Indiana, Illinois, Michigan, Wisconsin, Iowa, Minnesota, Nebraska, Kansas and Missouri. In these ten states the area under grain has increased from 24,469,916 acres in 1862 to 82,912,334 acres in 1891, and the grain product from 690,040,825 bushels in 1862 to 2,316,949,164 bushels in 1891.

The average price of grain in these states in 1862 was 27.9 cents per bushel; in 1891, 40.06 cents, and in 1895, 23.8 cents. The Dakotas, Washington and Oregon are left out of the calculation. These would add millions, both to the acreage and the product.

The Chicago Receivers and Shippers' Association is again showing some signs of life and now has in contemplation the establishment of a complaint bureau, for keeping tab on the weighing at the different Chicago elevators and giving more attention to the interests of those who patronize the market. Such action would surely be appreciated.

The Chicago and Northwestern Granaries Co. is passing through the throes of reorganization. The business for the past year was unprofitable, and no dividends were paid in 1895. In fact, the business has been unsatisfactory for the last four years. The reorganization contemplates the issue of bonds and a rearrangement of the capital stock.

Does anyone know by what right or authority a railroad company clips, cleans or mixes grain? If the charter of any road permits it to go into this business it should be annulled immediately. Transferring may properly be considered a part of the carriers' duties, but the other work now done in the railroad transfer elevators belongs to the cleaning houses.

The directors of the Grain Shippers' Association of Northwest Iowa will meet to-morrow to take final action on the articles of incorporation of the Elevator Owners' Mutual Fire Insurance Company. It will confine its business to grain elevators exclusively and the promoters hope to save members at least 40 per cent. of what they are now paying for insurance.

Do not postpone making application for membership in the Grain Dealers' National Association. Remember that the trade is sorely in need of the attention of an active organization. The grain trade is the only business of importance which is not well organized and on the watch for opportunities to protect and advance the interests of members.

It appears that the pessimist was not far out of the way when he said that to demonstrate the value of anything to the Western farmer was simply to invite all sorts of insect and other enemies. A farmer in Southern Illinois says that two enemies to Kaffir corn have made their appearance the past season. One is an insect that bores into the kernel when it is half grown and the other is mildew.

On the question of cereal prices for the future, not for any special time, but simply for the crops say of the next few years, the feeling seems to be quite general that a higher level is to prevail. The Mark Lane Express says editorially: "The whole epoch of over-production is clearly on the wane. Argentina, the last great factor on that side of the account, is found to have arrived on the scene only just in time to balance the declining wheat exports of India and Australia. In America and in the United States wheat cultivation is maintained, but the population in-

creases year by year, while the yield of wheat is stationary. Thus over-production is a vanishing danger, and with the close of the present century will have vanished altogether."

A poor, persecuted Chicago bucket shop man, against whom an indictment is pending, says he wants his case tried right away. He says he is tired of being plundered by every policeman, politician or anybody with a pull strong enough to make him trouble. Tears of sympathy will trickle down the cheeks of many a bucket shop patron when he thus learns that there are people with a strong enough pull to pull the leg of a bucketshop keeper.

Some of the railroad people are worried over the fact that the Kansas City, Pittsburg & Gulf R. R. expects to open its line from Kansas City through to Port Arthur, Texas, on the Sabine Pass, next spring. It is the shortest route to the gulf from Kansas City by over 100 miles, and gives a port for the latter city 500 miles nearer than New York. East-bound lines from Kansas City, St. Louis and Chicago will have to "do something" if gulf competition for export grain trade keeps on getting keener, as this new road indicates that it will.

The New York Sun is consistently down on the Department of Agriculture and never loses an opportunity to jump on it. Speaking of the suggestion made by the Patrons of Husbandry that McKinley appoint a practical farmer as Secretary, it says: "Chemists and bug hunters and rain coaxers and grasshopper charmers and mildew exterminators and moth slayers and cyclone stoppers and pig protectors and seventeen thousand five hundred and nineteen other kinds of friends of agriculture swarm about the Secretary. If he knew the first thing about agriculture he would be ruined. Let him be taken from any other trade or profession under heaven, but a farmer he should not be. What has the department of agriculture to do with farming? It is an institution for the cultivation of bugs, woodpeckers' stomachs, pocket gophers and bulletins." The highest compliment that can be paid this diatribe of the Sun's is that it sounds like Secretary Morton's own vigorous and pointed English.

The vesselmen on the great lakes are figuring up their balance sheets for the past season. Like everyone else, they claim that the profit has about disappeared from business. Rates on corn from Chicago to Buffalo the past season, averaging the time, were the lowest on record. The rate figures up 1.183 cents, as compared with 1.69 cents in 1895 and 1.19 in 1894. The movement of grain by lake was the largest in the history of Chicago. In spite of low rates, the vessel earnings for the season are reckoned at between 4 and 12 per cent. This, however, does not take account of depreciation. The season has been free from disasters of any magnitude. The outlook for business next year is good, but the conditions of the traffic are such that high rates are hardly expected. Nearly all the new boats under construction are of the largest class. Only one wooden vessel is being constructed. The small craft seems doomed on the great lakes. Between the big vessels, the building of which has more than kept pace with

the traffic, and the continued low rates, the small vessels have had a hard time of it.

A Nebraska traffic manager has the right idea of the fair treatment due the elevator men who keep their houses open for the receipt of grain the year around. He has issued an order to the effect that cars shall not be sidetracked for those who have not grain stored to load into them. He is opposed to transient buyers using the rolling stock of his road as a warehouse, and thereby delaying the business of the road and reducing the earning power of its cars. Such protection should be granted the elevator man by every road.

OFF GRADE OATS ON THE CHICAGO MARKET.

Chicago will have another new grain transfer elevator this month and an old one will have its capacity doubled before the year is closed, and still another is being improved. These, with the new one illustrated in this number, the transfer elevators already running, together with the cleaning houses of Chicago, make it one of the best markets of the country for off grade oats.

The Chicago shippers are buying and shipping immense quantities of oats. They buy No. 3 oats at several cents below the price of No. 2, have them clipped, cleaned and mixed as much as they desire for three-fourths of a cent a bushel and sell them as No. 2 clipped at the advanced price. The carriers charge nothing for transferring. So many of them are engaged in this business that the competition for lightweight oats in the Chicago market keeps the price of light oats nearer to the price of No. 2 oats than is justified by their value.

Country elevator men who ship much oats can well afford to put in a small clipper and clip and clean their oats before shipping. By so doing they will save freight on an immense amount of hulls and dirt and get a better price for their oats at the terminal markets. Some have done this with profit, while others have failed to make anything by it, but it must be admitted by those who have failed that the cause of their not finding it a profitable venture was due to a short crop or to the condition of the crop or market. The Eastern markets are becoming large consumers of clipped oats; in some places unclipped oats are unsalable.

FLAXSEED.

The receipts of flaxseed at the principal western markets for November show a large falling off from October, being 2,439,000 bushels as compared with 5,351,422 bushels received during October. The total receipts for the four months of the crop year at the six primary markets have been 13,638,292 bushels, of which all but 1,560,000 bushels was received at Duluth, Chicago and Milwaukee.

Of the 1,560,000 bushels received at St. Louis, Kansas City and Minneapolis, nearly if not quite 60 per cent. or 900,000 bushels has been duplicated in receipts at other points, leaving 12,738,000 bushels as actual receipts so far on this crop.

To this is to be added the receipts at interior western crushers, from the directly tributary country. These mills are thirteen in number, and their receipts so far on this crop, other than figured above, cannot have been far from 1,500,000 bushels, making total receipts so far 14,238,000 bushels.

It appears that the receipts during the same four months last year were 72 per cent. of the total receipts for the year, and if that same proportion

holds good this year it is evident that the 1896 crop could not have been far from 19,800,000 bushels.

These figures are perhaps a little high, but it should be remembered that they include only statistics for the states west of Chicago, and contemplate nothing for seed, which will require at least another 1,000,000 bushels aside from what will be shipped back into the country for this purpose from primary markets. It will undoubtedly be found, therefore, that counting in the small lots of seed raised in Michigan, Ohio and New York, that the total crop will exceed 20,000,000 bushels, possibly 21,000,000 bushels.—Commercial Record, Duluth.

Trade Notes

The A. P. Dickey Mfg. Co. of Racine, Wis., is now running its shops with a full force 10 hours per day.

The Link Belt Machinery Co. of Chicago has established a branch office at Minneapolis, where it is now represented by The Link Belt Supply Co., who will look after the company's trade in the Northwest.

P. H. Jacobus of Millstadt, Ill., writes us: "I am beginning to sell my car movers. I think if the Jacobus Car Mover once gets on the market so that the elevator people know what they are I will have no trouble in selling them."

There are three sizes of standard catalogues, 9x12 inches, 6x9 inches and 4½x6 inches. We recommend the 6x9-inch size for machinery catalogues. When they must be larger or smaller, one or the other standard sizes should be adopted if possible.—American Machinist.

The Cincinnati Corrugating Company of Piqua, Ohio, reports an appreciable impetus in the demand for their productions of steel and iron roofings, corrugated arches, lath, shutters and doors, galvanized iron, etc., since the recent election, and is enjoying a good trade on these goods. The company has issued a circular relating to roofings, giving much valuable information upon the subject that should be in the hands of all who use roofing, of whatever kind, which they will be pleased to send upon request.

Read the constitution and by-laws of the Grain Dealers' National Association in the back part of this number, sign and mail to the secretary.

Much complaint comes from grain dealers all over the country on account of the dry rot in corn, as much as two and three bushels of this kind of corn being found in a single load.—Press, Rossville, Ill.

The Standard Grain Co. has begun suit at Duluth, Minn., against the Farmers' Co-Operative Union to recover \$1,300.75 damages by reason of the failure of the defendant to deliver wheat purchased by the plaintiff. An attachment has been asked for on the ground that the defendant is a foreign corporation.

The Dent Grain Co. has begun suit at Sioux City, Iowa, against L. Silver for \$126.75, alleged to be due because of the failure of the defendant to keep a contract. The plaintiff alleges that in August, 1896, it made a contract with the defendant for the purchase of two cars of wheat, to be on cars at Luton or Hornick, Iowa. The purchase price was to be \$552, but it is alleged Silver failed to keep his part of the contract, and deliver the wheat. The plaintiff alleges it had resold the wheat, and was obliged to purchase wheat in Chicago to fill its contract, by reason of which transaction it lost \$126.75.

In the case of the Southern Pacific Co. vs. the California Railroad Commission to restrain the commission from enforcing its reduction in freight charges ordered fifteen months ago, Judge McKenna, of the United States Circuit Court at San Francisco, held that the commission's functions were not only judicial but legislative, and that it has power not only to adjust rates of freight and passenger traffic, but also to enforce its decrees. The court decided that that part of its previous order staying the execution of the resolution of the board of railroad commissioners reducing rates on grain 8 per cent. be continued.

RANGE OF PRICES AT CHICAGO.

The daily range of prices for cash grain at Chicago since November 15 has been as follows:

November.	No. 2+ R.W. WHT.		No. 2 spg WHT.		No. 2 CORN.		No. 2 OATS.		No. 2 RYE.		No. 3+ BARLEY		No. 1+ FLAXSEED	
	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.
15.....	87 1/4	87 1/4	24 1/4	25 1/4	18 1/4	19 1/4	38 1/4	38 1/4	25 1/4	25 1/4	37 1/4	37 1/4	73 1/4	75 1/4
16.....	87 1/4	87 1/4	24 1/4	25 1/4	18 1/4	19 1/4	38 1/4	38 1/4	25 1/4	25 1/4	37 1/4	37 1/4	73 1/4	75 1/4
17.....	88	88	24 1/4	25 1/4	18 1/4	19 1/4	38 1/4	38 1/4	25 1/4	25 1/4	37 1/4	37 1/4	73 1/4	75 1/4
18.....	88	88	24 1/4	25 1/4	18 1/4	19 1/4	38 1/4	38 1/4	25 1/4	25 1/4	37 1/4	37 1/4	73 1/4	75 1/4
19.....	87 1/4	87 1/4	23 1/4	24 1/4	18 1/4	19 1/4	37 1/4	37 1/4	26 1/4	26 1/4	37 1/4	37 1/4	74 1/4	74 1/4
20.....	87 1/4	87 1/4	23 1/4	24 1/4	18 1/4	19 1/4	37 1/4	37 1/4	26 1/4	26 1/4	37 1/4	37 1/4	74 1/4	74 1/4
21.....	87 1/4	87 1/4	23 1/4	24 1/4	18 1/4	19 1/4	37 1/4	37 1/4	26 1/4	26 1/4	37 1/4	37 1/4	74 1/4	74 1/4
22.....	87 1/4	87 1/4	23 1/4	24 1/4	18 1/4	19 1/4	37 1/4	37 1/4	26 1/4	26 1/4	37 1/4	37 1/4	74 1/4	74 1/4
23.....	87 1/4	87 1/4	23 1/4	24 1/4	18 1/4	19 1/4	37 1/4	37 1/4	26 1/4	26 1/4	37 1/4	37 1/4	74 1/4	74 1/4
24.....	89 1/4	89 1/4	23 1/4	24 1/4	19 1/4	19 1/4	38 1/4	38 1/4	27 1/4	27 1/4	37 1/4	37 1/4	75 1/4	75 1/4
25.....	89 1/4	89 1/4	23 1/4	24 1/4	19 1/4	19 1/4	38 1/4	38 1/4	27 1/4	27 1/4	37 1/4	37 1/4	75 1/4	75 1/4
26.....	89 1/4	89 1/4	23 1/4	24 1/4	19 1/4	19 1/4	38 1/4	38 1/4	27 1/4	27 1/4	37 1/4	37 1/4	75 1/4	75 1/4
27.....	89 1/4	89 1/4	23 1/4	24 1/4	19 1/4	19 1/4	38 1/4	38 1/4	27 1/4	27 1/4	37 1/4	37 1/4	75 1/4	75 1/4
28.....	89 1/4	89 1/4	23 1/4	24 1/4	19 1/4	19 1/4	38 1/4	38 1/4	27 1/4	27 1/4	37 1/4	37 1/4	75 1/4	75 1/4
29.....	89 1/4	89 1/4	23 1/4	24 1/4	19 1/4	19 1/4	38 1/4	38 1/4	27 1/4	27 1/4	37 1/4	37 1/4	75 1/4	75 1/4
30.....	89 1/4	89 1/4	23 1/4	24 1/4	19 1/4	19 1/4	38 1/4	38 1/4	27 1/4	27 1/4	37 1/4	37 1/4	75 1/4	75 1/4
Dec. 1.....	94	94	23 1/4	23 1/4	18 1/4	18 1/4	42 1/4	42 1/4	25 1/4	25 1/4	37 1/4	37 1/4	75 1/4	75 1/4
2.....	92	92 1/4	23 1/4	23 1/4	18 1/4	18 1/4	41 1/4	41 1/4	26 1/4	26 1/4	37 1/4	37 1/4	75 1/4	75 1/4
3.....	91	92	22 1/4	23 1/4	18 1/4	18 1/4	41 1/4	41 1/4	24 1/4	24 1/4	37 1/4	37 1/4	75 1/4	75 1/4
4.....	91 1/4	92	22 1/4	23 1/4	18 1/4	18 1/4	41 1/4	41 1/4	25 1/4	25 1/4	37 1/4	37 1/4	75 1/4	75 1/4
5.....	90 1/4	92 1/4	21 1/4	23 1/4	18 1/4	18 1/4	40 1/4	40 1/4	25 1/4	25 1/4	37 1/4	37 1/4	75 1/4	75 1/4
6.....	91	91	23 1/4	23 1/4	18 1/4	18 1/4	39 1/4	39 1/4	24 1/4	24 1/4	36 1/4	36 1/4	77 1/4	77 1/4
7.....	90	90	23 1/4	23 1/4	18 1/4	18 1/4	39 1/4	39 1/4	25 1/4	25 1/4	37 1/4	37 1/4	77 1/4	77 1/4
8.....	89 1/4	89 1/4	23 1/4	23 1/4	18 1/4	18 1/4	38 1/4	38 1/4	25 1/4	25 1/4	36 1/4	36 1/4	77 1/4	77 1/4
9.....	89 1/4	89 1/4	23 1/4	23 1/4	18 1/4	18 1/4	38 1/4	38 1/4	25 1/4	25 1/4	36 1/4	36 1/4	77 1/4	77 1/4
10.....	89 1/4	89 1/4	23 1/4	23 1/4	18 1/4	18 1/4	38 1/4	38 1/4	25 1/4	25 1/4	36 1/4	36 1/4	77 1/4	77 1/4
11.....	89 1/4	89 1/4	23 1/4	23 1/4	18 1/4	18 1/4	38 1/4	38 1/4	25 1/4	25 1/4	36 1/4	36 1/4	77 1/4	77 1/4
12.....	89 1/4	89 1/4	23 1/4	23 1/4	18 1/4	18 1/4	38 1/4	38 1/4	25 1/4	25 1/4	36 1/4	36 1/4	77 1/4	77 1/4
13.....	89 1/4	89 1/4	23 1/4	23 1/4	18 1/4	18 1/4	38 1/4	38 1/4	25 1/4	25 1/4	36 1/4	36 1/4	77 1/4	77 1/4
14.....	89 1/4	89 1/4	23 1/4	23 1/4	18 1/4	18 1/4	38 1/4	38 1/4	25 1/4	25 1/4	36 1/4	36 1/4	77 1/4	77 1/4
15.....	89 1/4	89 1/4	23 1/4	23 1/4	18 1/4	18 1/4	38 1/4	38 1/4	25 1/4	25 1/4	36 1/4	36 1/4	77 1/4	77 1/4

*Holiday. †In store or to go to store. ‡Free on board or switched. §On track or to go to store.

During the week ending November 14 Prime Contract Timothy sold at \$2.55@2.60 per cental, Prime Contract Clover Seed at \$8.25@8.50, Hungarian at \$0.40@0.60, German millet at \$0.45@0.65, buckwheat at \$0.55@0.65 per 100 pounds.

During the week ending November 21 Prime Contract Timothy sold at \$2.50@2.60 per cental, Prime Contract Clover Seed at \$8.00@8.25, Hungarian at \$0.40@0.60, German millet at \$0.50@0.65, buckwheat at \$0.55@0.75 per 100 pounds.

During the week ending November 28 Prime Contract Timothy sold at \$2.52 1/2@2.55 per cental, Prime Contract Clover Seed at \$8.00@8.35, Hungarian at \$0.40@0.60, German millet at \$0.50@0.70, buckwheat at \$0.50@0.75 per 100 pounds.

During the week ending December 5 Prime Contract Timothy sold at \$2.55@2.60, Prime Contract Clover Seed at \$8.00@8.35, Hungarian at \$0.40@0.60, German millet at \$0.50@0.75, buckwheat at \$0.50@0.90 per 100 pounds.

During the week ending December 12 Prime Contract Timothy sold at \$2.55@2.65 per cental, Prime Contract Clover Seed at \$8.00, Hungarian at \$0.40@0.60, German millet at \$0.55@0.70, buckwheat at \$0.70@0.90 per 100 pounds.

RECEIPTS AND SHIPMENTS AT DULUTH.

The receipts and shipments of grain and hay at Duluth, Minn., during the month of November, as compared with the same period of the preceding year, were, according to Frank E. Wyman, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	5,144,563	11,008,959	6,575,252	9,349,703
Corn, bushels.....	27,342	1,584	105,080	1,584
Oats, bushels.....	258,821	308,419	505,337	22,129
Barley, bushels.....	1,107,740	752,523	2,000,912	1,136,614
Rye, bushels.....	151,362	103,631	237,046	38,873
Grass seed, pounds.....				
Flaxseed, bushels.....	1,270,827	1,050,783	1,633,556	996,973
Flour, barrels.....	712,540		1,187,675	1,191,510
Flour production Duluth and Superior.....	391,120	556,625		

RECEIPTS AND SHIPMENTS AT MILWAUKEE.

The receipts and shipments of grain and hay at Milwaukee, Wis., during the month of November, as compared with the same period of the preceding year, were, according to Wm. J. Langson, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	531,700	1,114,750	240,270	357,400
Corn, bushels.....	102,700	105,950	132,778	9,750
Oats, bushels.....	956,000	972,000	1,077,882	923,387
Barley, bushels.....	1,810,000	1,828,750	1,556,750	1,322,731
Rye, bushels.....	181,200	164,030	242,200	84,206
Grass Seed, pounds.....	1,636,928	593,600	1,189,693	200,990
Flaxseed, bushels.....	90,395	83,975	69,600	64,960
Hay, tons.....	1,766	1,838	150	219
Flour, barrels.....	355,000	566,450	364,602	461,305

RECEIPTS AND SHIPMENTS AT PEORIA.

The receipts and shipments of grain and hay at Peoria, Ill., during the month of November, as compared with the same period of the preceding year, were, according to R. C. Grier, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	50,400	67,200	70,800	62,400
Corn, bushels.....	1,148,150	1,901,930	277,400	437,000
Oats, bushels.....	1,047,500	1,554,800	1,643,900	1,972,800
Barley, bushels.....	313,100	372,400	233,000	290,500
Rye, bushels.....	11,400	14,700	3,000	3,000
Mill Feed, tons.....	210	810	6,175	7,754
Seeds, pounds.....	251,057	866,500	153,500	210,000
Broom Corn, pounds.....	163,000	195,000	124,500	165,000
Hay, tons.....	2,098	3,850	440	1,100
Flour, barrels.....	23,820	18,300	23,100	28,650
Spirits and Liquors, bbls.....	675	950	26,939	21,701
Syrup and Glucose, bbls.....	2,850	540	38,280	53,185

RECEIPTS AND SHIPMENTS AT BUFFALO.

The receipts and shipments of grain and hay at Buffalo, N. Y., during the month of November, as compared with the same period of the preceding year, were, according to Wm. Thurstone, secretary of the Merchants' Exchange, as follows:

Articles.	Receipts by Lake.		Shipments by Canal.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	6,146,664	10,107,340	1,146,614	1,540,067
Corn, bushels.....	5,437,442	4,055,010	765,116	358,390
Oats, bushels.....	3,604,460	1,453,638	425,172	258,561
Barley, bushels.....	5,765,185	2,811,980	1,418,329	1,438,939
Rye, bushels.....	429,729	282,500	211,945	
Grass seed, bags.....	11,779	5,032		
Flaxseed, bushels.....	1,199,500	931,437	*43,087,870	*37,084,606
Hay, tons.....				
Flour, barrels.....	1,872,524	1,507,755	2,500	

* Pounds.

RECEIPTS AND SHIPMENTS AT MINNEAPOLIS.

The receipts and shipments of grain and hay at Minneapolis, Minn., during the month of November, as compared with the same period of the preceding year, were, according to G. D. Rogers, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	7,184,020	11,502,200	560,350	2,844,350
Corn, bushels.....	100,040	129,780	5,400	21,210
Oats, bushels.....	684,230	781,900	560,940	357,570
Barley, bushels.....	168,710	171,970	55,170	51,600
Rye, bushels.....	45,560	59,550	13,720	2,900
Flaxseed, bushels.....	187,720	381,020	116,550	212,140
Hay, tons.....	1,837	3,043	10	148
Flour, barrels.....	9,975	17,126	1,343,031	1,194,158

RECEIPTS AND SHIPMENTS AT SAN FRANCISCO.

The receipts and shipments of grain and hay at San Francisco, Cal., during the month of November, as compared with the same period of the preceding year, were, according to T. C. Friedlander, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, centals.....	1,657,824	1,201,588	1,378,006	1,227,651
Corn, ".....	32,376	37,241	751	1,241
Oats, ".....	94,487	52,420	1,930	1,346
Barley, ".....	389,642	262,705	369,304	206,379
Rye, ".....	44,328	4,355	59,588	
Flaxseed, bushels.....	6,634	17,892		
Hay, tons.....	8,061	8,847	657	664
Flour, barrels.....	114,812	130,278	73,231	98,881

RECEIPTS AND SHIPMENTS AT CINCINNATI.

The receipts and shipments of grain and hay at Cincinnati, Ohio, during the month of November, as compared with the same period of the preceding year, were, according to C. B. Murray, superintendent of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1895.	1896.	1895.
Wheat, bushels.....	70,456	63,655	54,451	54,120
Corn, bushels.....	473,064	222,807	91,652	43,492
Oats, bushels.....	361,481	130,297	133,751	124,003
Barley, bushels.....	208,556	177,200		1,400
Rye, bushels.....	27,491	32,776	12,251	27,316
Clover Seed, bags.....	3,187	1,125	2,429	1,069
Timothy Seed, bags.....	2,946	2,864	565	231
Other grass seeds, bags.....	1,864	2,185	2,090	278
Hay, tons.....	5,029	5,507	1,433	845
Flour, barrels.....	111,568	182,583	89,063	147,961
Malt, bushels.....	36,483	43,191	26,062	26,072

INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector D. W. Andrews, the grain received at Chicago during the month of November, 1896, was graded as follows:

Railroad.	WINTER WHEAT.									
	White.			Hard.			Red.			No G'de.
	2	3	4	1	2	3	1	2	3	
C. B. & Q.	2	3	4	1	2	3	1	2	3	4
C. R. I. & P.	1	18	5	6	86	15	12	54	16	2
Chicago & Alton	1	1	5	1	18	3	4	16	3	3
Illinois Central	1	1	1	1	1	2	1	15	9	3
Freeport Div., I. C.	1	1	1	1	1	1	1	1	1	1
Galena Div., C. & N. W.	1	1	1	1	1	1	1	1	1	1
Wis. Div., C. & N. W.	2	1	1	1	1	1	1	1	1	1
Wabash	1	1	1	1	1	1	1	1	1	1
C. & E. I.	1	1	1	1	1	1	1	1	1	1
C. M. & St. P.	6	6	1	1	1	1	1	1	1	1
Wisconsin Central	1	1	1	1	1	1	1	1	1	1
Chicago & Great West	1	1	1	1	1	1	1	1	1	1
A. T. & S. Fe.	1	1	1	1	1	1	1	1	1	1
E. J. & E.	1	1	1	1	1	1	1	1	1	1
Through and special	1	1	1	1	1	1	1	1	1	1
Total each grade	8	10	16	195	86	128	139	11	394	
Total winter wheat	18	211								

Railroad.	SPRING WHEAT.									
	Colo-rado.			Northern.			No Grade.			Mixed Wheat.
	2	3	4	2	3	4	2	3	4	
C. B. & Q.	1	20	506	23	4	10	2	1	1	2
C. R. I. & P.	1	65	30	1	1	1	1	1	1	1
Chicago & Alton	1	1	1	1	1	1	1	1	1	1
Illinois Central	1	1	1	1	1	1	1	1	1	1
Freeport Div., I. C.	1	1	1	1	1	1	1	1	1	1
Galena Div., C. & N. W.	19	1	281	41	1	1	1	1	1	1
Wis. Div., C. & N. W.	1	1	1	1	1	1	1	1	1	1
Wabash	1	1	1	1	1	1	1	1	1	1
C. & E. I.	1	1	1	1	1	1	1	1	1	1
C. M. & St. P.	1	149	16	1	1	1	1	1	1	1
Wisconsin Central	1	1	1	1	1	1	1	1	1	1
Chicago & Great West	1	6	6	2	1	1	1	1	1	1
A. T. & S. Fe.	1	1	1	1	1	1	1	1	1	1
E. J. & E.	1	1	1	1	1	1	1	1	1	1
Through and special	1	4	2	9	1	1	1	1	1	1
Total each grade	20	4	32	127	1	4	13	3	8	
Total spring wheat	20	1277								

Railroad.	CORN.									
	Yellow.			White.			No Grade.			No Grade.
	2	3	4	2	3	4	2	3	4	
C. B. & Q.	328	45	29	17	608	198	173	36	12	
C. R. I. & P.	112	7	2	1	381	120	73	12	1	
Chicago & Alton	140	82	14	18	152	82	267	11	9	
Illinois Central	149	253	39	141	61	153	81	9	1	
Freeport Div., I. C.	30	3	2	1	110	6	3	1	1	
Galena Div., C. & N. W.	157	16	12	1	186	30	47	1	1	
Wis. Div., C. & N. W.	1	1	1	1	1	1	1	1	1	
Wabash	68	142	42	113	33	177	66	20	6	
C. & E. I.	55	134	13	48	33	107	132	6	1	
C. M. & St. P.	36	16	1	1	162	59	5	1	1	
Wisconsin Central	9	2	1	1	82	11	1	2	1	
Chicago & Great West	51	29	16	7	71	29	39	1	1	
A. T. & S. Fe.	94	44	17	1	332	82	15	1	1	
E. J. & E.	52	156	1	1	125	22	11	1	1	
Through and special	1	1	1	1	1	1	1	1	1	
Total each grade	1,282	959	187	350	2,336	1076	913	99	7,202	
Total corn										

Railroad.	OATS AND RYE.									
	OATS.					RYE.				
	White.			W't C.*		No Grade.			No Grade.	
C. B. & Q.	2	192	20	470	9	117	40	3	1	
C. R. I. & P.	15	180	5	505	18	17	24	3	1	
Chicago & Alton	1	8	187	15	1	1	1	1	1	
Illinois Central	1	9	1	427	50	1	4	1	1	
Freeport Div., I. C.	41	236	27	110	21	5	1	1	1	
Galena Div., C. & N. W.	25	768	25	282	6	56	1	1	1	
Wis. Div., C. & N. W.	108	146	1	8	2	4	1	1	1	
Wabash	3	7	1	210	2	4	1	1	1	
C. & E. I.	2	2	3	256	1	1	1	1	1	
C. M. & St. P.	88	526	63	212	8	53	8	1	1	
Wisconsin Central	36	1	1	1	6	7	1	1	1	
Chicago & Great West	5	135	20	61	3	13	3	1	1	
A. T. & S. Fe.	1	9	13	93	3	13	3	1	1	
E. J. & E.	1	48	101	3	3	13	3	1	1	
Through and special	56	64	8	38	3	4	6	1	1	
Total each grade	349	2366	202	2361	118	302	115	8	425	
Total oats and rye					5,936					

Railroad.	BARLEY.									
	Bay Breeding.					Chevalier.				
	3	3	2	3	4	5	No Grade.	Total No. Cars	all Gr'n by Roads	
C. B. & Q.	104	105	6	1	1	1	1	3,247	1	
C. R. I. & P.	170	129	31	4	1	1	1	1,950	1	
Chicago & Alton	1	1	1	1	1	1	1	1,066	1	
Illinois Central	71	225	5	1	1	1	1	1,435	1	
Freeport Div., I. C.	5	334	72	3	1	1	1	963	1	
Galena Div., C. & N. W.	11	365	42	13	6	1	1	2,395	1	
Wis. Div., C. & N. W.	3	1	1	1	1	1	1	740	1	
Wabash	1	1	1	1	1	1	1	909	1	
C. & E. I.	1	1	1	1	1	1	1	802	1	
C. M. & St. P.	659	155	2	1	1	1	1	2,351	1	
Wisconsin Central	39	78	8	1	1	1	1	512	1	
Chicago & Great West	6	13	2	1	1	1	1	459	1	
A. T. & S. Fe.	1	10	20	1	1	1	1	886	1	
E. J. & E.	1	5	1	1	1	1	1	625	1	
Through and special	1	1	1	1	1	1	1	18,221	1	
Total each grade	17	1,758	831	90	12	18,221				
Total barley										
Total grain, cars								2,708	18,221	

VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, Dec. 12, 1896, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, Bu.	Oats, bu.	Rye, bu.	Barley, Bu.
Albany	50,000	125,000	10,000		
Baltimore	348,000	1,712,000	534,000	87,000	
Boston	1,639,000	658,000	180,000	1,000	60,000
Buffalo	2,808,000	461,000	485,000	142,000	1,884,000
do. afloat	13,497,000	4,836,000	3,305,000	999,000	41,000
Chicago	2,000	15,000	5,000	73,000	
do. afloat	404,000	57,000	34,000	39,000	28,000
Cincinnati	2,677,000	4,000	2,000	353,000	124,000
do. afloat	242,000				
Indianapolis	190,000	162,000			
Kansas City	481,000	20,000	160,000	11,000	
Milwaukee	348,000	3,000	6,000	159,000	76,000
do. afloat	18,514,000	9,000	540,000	33,000	49,000
Minneapolis	447,000	35,000	110,000	28,000	38,000
Montreal	7,038,000	6,317,000	3,448,000	469,000	2,117,000
New York	840,000	363,000	185,000	39,000	317,000
do. afloat	50,000	22,000			150,000
Oswego	183,000	164,000	407,000	7,000	25,000
Peoria	860,000	1,252,000	150,000		
Philadelphia	2,267,000	489,000	75,000	63,000	16,000
do. afloat	1,123,000	229,000	472,000	102,000	
Toledo	219,000		59,000		91,000
Toronto	709,000	416,000	108,000	45,000	391,000
On Canals	113,000	1,000			
On Lakes					
On Miss. River					
Total	54,284,000	17,461,000	11,359,000	2,582,000	5,493,000
Corresponding date 1895	66,834,000	5,227,000	6,134,000	1,555,000	4,475,000

WHEAT RECEIPTS AT PRIMARY MARKETS.

The wheat receipts at nine primary markets during the twenty-three weeks ending Dec. 5, for the last three years, according to the Cincinnati Price Current were as follows:

	1896.	1895.	1894.
St. Louis	9,128,000	8,226,000	8,112,000
Toledo	5,847,000	4,739,000	11,949,000
Detroit	2,244,000	1,577,000	2,885,000
Kansas City	5,282,000	5,575,000	5,524,000
Cincinnati	625,000	557,000	555,000
Winter	23,126,000	20,674,000	23,025,000
Chicago	15,502,000	16,151,000	19,962,000
Milwaukee	5,057,000	5,480,000	3,659,000
Minneapolis	36,839,000	42,795,000	32,667,000
Duluth	35,090,000	35,595,000	23,444,000
Spring	92,518,000	100,021,000	79,712,000
Total, bus. 23 weeks	115,644,000	120,695,000	108,737,000

EXPORTS FROM ATLANTIC PORTS.

The exports of breadstuffs, as compiled by George F. Stone, secretary of the Chicago Board of Trade, from the Atlantic ports during the two weeks ending Dec. 12, as compared with same weeks last year, have been as follows:

Articles.	For week ending Dec. 12.		For week ending Dec. 7.		For week ending Dec. 5.		Nov. 30.	
	1896.	1895.	1896.	1895.	1896.	1895.	1896.	1895.
Wheat, busbels.....	1,548,000	1,094,000	980,000	1,066,000				
Corn, bushels.....	3,178,000	1,789,000	2,259,000	1,745,000				
Oats, bushels.....	855,000	3,000	48,000	37,000				
Rye, bushels.....	85,000		256,000					
Flour, barrels.....	348,600	307,000	282,400	212,000				

ELEVATOR

GRAIN NEWS

An elevator is needed at Westfield, Ill.

An elevator is to be erected at Butler, Ill.

An elevator may be erected at Humboldt, Ill.

An elevator is being erected at Mt. Carmel, Ill.

A new elevator has been completed at Borton, Ill.

J. J. Morris is building an elevator at Del Rey, Ill.

William Scott is erecting an elevator at Seneca, Kan.

An elevator has been erected at East Watertown, Mass.

B. F. Howell has opened a grain store at Riverhead, N. J.

The Cargill Elevator Co. has built an elevator at Oneta, N. D.

Wm. S. Rowell will erect an elevator at Newmarket, N. H.

An elevator is being built at Holbrook, Iowa, by Mr. Holbrook.

Frank Place has opened a grain and feed store at Concord, N. H.

Morton & Pearson are building an elevator at Danphin, Man.

W. Murray has opened a grain store at South Portland, Maine.

Miller & La Rue's new elevator at Devil's Lake, N. D., is completed.

Samuel Ashbrook, grain dealer of Circleville, Ohio, failed recently.

J. H. Hale has sold his grain business at Oxford, Ohio, to T. A. McDill.

S. C. Halverson, dealer in grain, hay, etc., at Tyler, Texas, failed recently.

Wm. Rowell of Lee, N. H., is building an elevator at New Market, Maine.

Henry Hanson has purchased Samuel Stahl's grain business at Price, Kan.

An elevator has been built at Sharon, N. D., by the Cargill Elevator Co.

J. E. Miller and T. E. Littell are building an elevator at Plainville, Ind.

Noble & Frede have bought F. J. Bayless' grain business at Watson, Mo.

George Resenberger intends to engage in the grain business at Sullivan, Ind.

McCaull, Webster & Co. are building a large elevator at Vermillion, S. D.

The Farmers' Elevator Co. of Atterbury, Ill., has sold its elevator at auction.

H. H. Wilson, grain dealer of Sullivan, Ill., has removed to Gerdink Station, Ill.

Farmers are trying to organize a company to erect an elevator at Dennison, Minn.

Wilcox's elevator at Milford, Ill., has been completed, and is now in operation.

J. D. Earhart has completed and is operating a new elevator at Partridge, Kan.

Edmond Maylor, dealer in grain and coal at Fisher, Ill., has sold his elevator.

L. M. Fairbanks has leased an elevator at Richner, Ill., where he is buying grain.

N. C. Boyum, dealer in grain and live stock at Madison, Wis., assigned recently.

Hallett & Morrison, grain dealers of Juliaetta, Idaho, have dissolved partnership.

A. Thompson has completed and is operating his new elevator at Smith Lake, Minn.

Hoppes Bros., dealers in feed and flour at Mainanoy City, Pa., are erecting an elevator.

The National Starch Co. is building a 200,000-bushel elevator at Indianapolis, Ind.

Henry Christleib, grain dealer of Mansfield, Ill., is building an elevator at that place.

It is said that preparations are being made to build an elevator at Nebraska Plains, Mass.

Schinstock Bros. have succeeded Henry Schinstock, grain dealer at West Point, Neb.

Wade & Tilson, dealers in grain, etc., at Texarkana, Tex., have dissolved partnership.

The Coöperative Elevator Co. of Lake Benton, Minn., which recently completed its elevator, has

been incorporated by Julius Kuse and thirteen others, with a capital stock of \$10,000.

McMichael & Co. have closed their grain warehouse at Mt. Vernon, S. D., for the season.

There is talk of forming a stock company to erect an elevator and flouring mill at Nauvoo, Ill.

Abraham Grove has leased the elevator at Moran, Ind., where he is now carrying on business.

A scheme is on foot to organize a company to build a flat warehouse at Granite Falls, Minn.

J. C. Worrall has succeeded P. Opp & Son, dealers in grain, hardware, etc., at Agnew, Neb.

J. Matthews & Co. have succeeded L. T. Hazen, dealer in grain, hay, etc., at Malden, Mass.

T. C. Honnell has succeeded Honnell & Price, dealers in grain, coal and stock at Everest, Kan.

The Marshall Grain Co. of Marshall, Ind., has repaired and overhauled its grain warehouse.

Scott Berrien has succeeded Berrien & Warren, dealers in grain, seeds, etc., at Princeton, N. J.

The Farmers' Elevator Co. has been incorporated at Reston, Man., with a capital stock of \$4,800.

An elevator is being erected at Wamego, Kan., to take the place of the one burned some time ago.

Charles Dielman Sr. and others have completed a new 25,000-bushel elevator at Wentworth, S. D.

George C. Stanley has built a large storehouse at Winthrop, Mass., for storing hay, grain and coal.

Jacob Winterscheidt has engaged in the grain and coal business at Germantown, Kan., a new station.

The Northwestern Elevator Co. is building an elevator of 20,000 bushels' capacity at Eldred, Minn.

S. R. Harry, formerly of the firm of Swinford & Co., has engaged in the grain business at Pittwood, Ill.

Ball & Co. are erecting an elevator at Caledonia, N. Y., to take the place of the one burned some time ago.

E. E. Hill has sold his grain and coal business at Moosup, Conn., and has retired from active business.

Donovan, Coope & Co., grain commission merchants of Detroit, Mich., have dissolved partnership.

T. W. Brooks, formerly of North Lewisburg, Ohio, writes us that he is building an elevator at Rex, Ohio.

On December 31 J. M. De Bolt will discontinue his grain business at Kappa, Ill., and remove to El Paso.

It is expected that the flax mill and the flax tow mill at Watertown, S. D., will soon be put in operation.

E. E. C. Swift of Falmouth, Mass., is enlarging his business and increasing his facilities for handling grain.

Duggan & Kennedy, who were engaged in the wholesale grain business at Scranton, Pa., have failed.

Elevator A2 at Minneapolis, Minn., for which D. A. Robinson of Chicago had the contract, is about completed.

M. H. Gollon has engaged in the grain business at Pekin, Ill., and is having a dump built at Stoehr's Station.

The old Grand Trunk Elevator at Portland, Maine, has been thoroughly overhauled and the machinery repaired.

The Northern Elevator Co. of Winnipeg, Man., has increased its capital stock from \$250,000 to \$500,000.

Burditt Bros. are rebuilding their elevator and feed mill at Rutland, Vt., which were burned some time ago.

Gants Bros., grain dealers at Garfield and Wenona, Ill., have failed, and their elevator at Garfield has been sold.

W. M. Marsden of Philadelphia, the inventor of corn pith cellulose, is planning to build a factory at Peoria, Ill.

It is reported that negotiations are pending regarding the erection of a large elevator at Port Huron, Mich.

The Mystic Milling Co. of Sioux City, Iowa, contemplates the erection of an elevator at Sioux City and at Leeds.

N. P. Clough & Co., millers of Wilnot Flat, N. H., have purchased A. H. Hill's grain business at Andover, N. H.

A committee of the City Council of Kingston, Ont., has recommended a bonus of \$25,000 and exemption from taxation for 20 years for the erection of a grain

elevator by the Montreal Transportation Co., to cost \$500,000. The proposition will be voted upon by the ratepayers.

Miller Bros', new elevator at Plato, Minn., is completed and is operated under the management of D. Bergman.

Joseph Murray has succeeded to the business of Murray, Sheridan & Thill, dealers in grain, etc., at Bancroft, Iowa.

Mathews & Kling, grain and lumber dealers, are erecting a corn crib of 20,000 bushels' capacity at Woodbine, Iowa.

F. H. Pierson & Co. write us that they are operating the elevator at Cortland, Neb., formerly owned by Brown Bros.

W. D. Fairbanks is building a warehouse and grain office at Blue Ridge, Ill., to take the place of those burned recently.

Egan Bros. have completed a grain warehouse at Wrightstown, Wis., where they have engaged in the grain business.

George Atcheson has bought the grain and hay business of F. G. Severance and has leased his steam mill at Erving, Mass.

The Galveston Wharf Co.'s elevator at Galveston, Texas, is being repaired and improved for expected large receipts in January.

A large elevator will be erected next season at Fosston, Minn., to be run in connection with the Stadsvold Mill at that place.

C. E. Dooley has bought a half interest in the elevator belonging to Carlisle & Blue, dealers in grain and coal at Downs, Ill.

John Flanagan and William Crook are building a grain warehouse at Readstown, Wis., where they will conduct a grain business.

Eben N. Fox has purchased Ed. Weston's grain business at Fryeburg, Maine, and Charles E. Fox has taken charge of the store.

Chas. L. Ruehrwein, grain and feed dealer of Cincinnati, Ohio, assigned recently. His liabilities are said to be \$10,000, assets \$17,500.

J. F. Wasson, W. H. Pankey and John Raley have formed a partnership and engaged in the grain and stock business at Harrisburg, Ill.

Tromanhauser Bros., elevator builders of Minneapolis, have the contract for the erection of a 12,000-bushel elevator at Watkins, Minn.

S. Crumbaugh, grain dealer of Leroy, Ill., will open a grain office at Empire Station, and connect the two offices by a telephone line.

Harry G. Cook has been appointed receiver of Douglas & Armstrong's elevator at Marseilles, Ill., and will settle up the firm's affairs.

Frutchey, McGeorge & Co. have succeeded the firm of Frutchey, Ale & McGeorge, grain dealers of Cass City, Mich., Mr. Ale retiring.

The Pennsylvania R. R. may erect two elevators at Erie, Pa., Counselman & Co. of Chicago, Ill., being the prospective lessees and operators.

Wm. L. Allen & Co. of New York City have bought the grain and stock commission business of J. W. Dunn & Co. of Wilkesbarre, Pa.

The firm of McCord Bros. has been incorporated at Superior, Iowa, with a capital stock of \$10,000, to carry on a grain and produce business.

The Iowa Grain and Produce Co. is erecting a number of corn cribs along the K. & W. R. R. One is being erected at New Virginia, Iowa.

G. B. Strickland of Livermore, Maine, has purchased Charles Allen's grain business at West Minot, where he is now carrying on business.

The Beltz Bros. Co. has succeeded C. M. Beltz & Co., dealers in flour, etc., and Beltz Bros., grain commission merchants of Minneapolis, Minn.

C. H. Weiss' elevator at Wentworth, S. D., is completed and in operation under the management of Charles Smith, an experienced grain man.

Twist Bros., grain dealers of Rochester, Ill., recently bought for \$4,420 the elevator at Pawnee, Ill., formerly belonging to Lochridge Bros.

E. Walker, grain dealer of Walker Station, Ill., has made arrangements to rebuild his elevator at Macon, which was destroyed by fire recently.

The Honey Grove Cotton Oil Co. has been incorporated at Honey Grove, Texas, with a capital stock of \$50,000, to manufacture cottonseed oil, etc.

It is said that the Northern Grain Co. of Ashland, Wis., which is building a large elevator at Manitowoc, contemplates the erection of a house at Collins.

The Port Stanley Elevator Co. (Ltd.) was recently incorporated at Port Stanley, Ont., and the following directors were elected: William Woollatt, Joseph De Gurse, Alex. Leslie, D. M. McKay and G. J. Leg-

gatt. These have made G. J. Leggatt president; William Woollatt, vice-president; Alex. Leslie, treasurer, and D. M. McKay, secretary.

Micklewait & Young have completed and are now operating their new elevator at Macedonia, Iowa. It has a full equipment of modern machinery.

It is expected that J. B. M. Kehlor of St. Louis will build an elevator at Litchfield, Ill., on the site of the Planet Mills, which were burned some time ago.

Everett, Aughenbaugh & Co., grain dealers of Waseca, Minn., are about to erect an elevator of 50,000 bushels' capacity at New Richmond, Minn.

The old Northwestern Elevator at Fulton, Iowa, is being torn down, and its machinery will be sent to South Chicago, Ill., and placed in another elevator.

The Annis Grain & Lumber Co.'s store at Manchester, N. H., was broken into by burglars recently, but their efforts to open the safe were unsuccessful.

C. G. Spaulding, one of the oldest grain men of Mapleton, Minn., and a leading business man, failed recently. His liabilities are \$27,000, assets \$17,000.

The Hord & Wells Cattle Co. of Clarks, Neb., has purchased the Fowler Elevator Co.'s elevator, and will continue the business of buying and shipping grain.

Alexander Gallagher, grain dealer and grocer of Osgood, Ind., has made an assignment. Liabilities \$6,000; assets \$3,000. The cause is attributed to hard times.

Business men of Mountain Lake, Minn., intend to build an elevator and engage in the grain business. A company is being formed with a capital stock of \$25,000.

The W. W. Cargill Co. has bought the Miller Hardware & Lumber Co.'s grain warehouse at Alma Center, Wis., and will at once erect a 25,000-bushel elevator.

The Northwestern Elevator Co.'s 20,000-bushel elevator at Climax, Minn., is about completed. It is equipped with a gasoline engine and other machinery.

Geo. L. Merritt & Co. write us that they have bought O. J. Roberts' elevator and grain business at Roberts, Ill., where they are now carrying on business.

W. F. Hanrahan, grain dealer of Charlotte, Iowa, contemplates making improvements in his elevator at that place, and may add a gasoline engine and feed mill.

C. E. Chandler and James Sheeran have formed a partnership at Wamego, Kan., for the purpose of carrying on a grain business and have erected an elevator.

Ex-Gov. E. C. D. Shortridge of North Dakota will engage in the grain business at Duluth, Minn., the firm name being Shortridge & Ely. Mr. Ely is from Minot, N. D.

Jas. H. Donovan and Patrick A. Ducey have formed a partnership to engage in the grain commission business at Detroit, Mich., with a capital stock of \$10,000.

Dean & Branley, dealers in flour and feed at Delhi, N. Y., have purchased John N. Arbuckle's elevator, coal sheds and stock, which they will add to their business.

Claggett, Huff & Co., grain dealers of Bloomington, Ill., have dissolved partnership by mutual consent, and the business is being continued by the Claggett Bros. Elevator Co.

Sharpless & Co., grain and feed dealers of Calgary, Northwest Territories, have sold out their branch business at Red Deer to Smith & Gaetz, general merchants.

Mead & Woodward, grain and feed dealers of Norwalk, Ohio, are now carrying on business in new quarters, having purchased and remodeled a building for their use.

West & Hutton of Terre Haute, Ind., have remodeled the old Tindolph warehouse at Terre Haute, Ind., into an elevator. Samuel Thompson is managing the business.

The Condee-Merrill Commercial Co. has been incorporated at Los Angeles, Cal., with a capital stock of \$10,000, to buy, sell and pack green and dried fruits, grain, etc.

On November 30 S. A. Hayward, grain dealer at Tremont, Ill., shipped four kinds of grain to Chicago. The lot consisted of four cars of corn, three of wheat, two of oats, and one of rye.

Johnson Allen and F. C. Bigelow have formed a partnership at Earlville, Iowa, where they will operate the Earlville elevator and steam mill, and deal in grain, feed, hay, etc.

It is reported that negotiations are pending for the purchase by the Brooklyn Wharf & Warehouse Co. of Brooklyn, N. Y., of all the floating elevators at New York, which are now owned by the Inter-

national Elevator Co. The latter company has a capital stock of \$2,200,000, and owns 19 elevators with a transfer capacity of 113,000 bushels per hour.

The Clifton Springs Distillery is erecting a grain warehouse and elevator on the B. & O. S. R. R. and Ludlow St., Cincinnati, Ohio, which will have a capacity of 100,000 bushels.

The Charleston & Western Carolina Railway, of which W. A. C. Ewen is vice-president, will build a grain elevator and extensive warehouse facilities at Port Royal, S. C.

The St. Paul & Kansas City Grain Co. is making extensive improvements to its Elevator "A" at Savanna, Ill., including the construction of an addition to be used for shelling corn.

The Texas Star Flour Mills at Galveston, Texas, will build an additional grain elevator of 300,000 bushels' capacity, thus increasing to 700,000 bushels. John Reymershoffer is president.

The Hunting Elevator Co. of McGregor, Iowa, is operating a branch house at Spencer, where it has a 15,000-bushel elevator in charge of Clarence Ellsworth, an experienced grain man.

The Northwestern Elevator Co. of Minneapolis has its 20,000-bushel elevator at Colenso, Minn., completed. The company will build a separate brick fireproof gasoline engine room.

E. F. Henney, formerly a farmer, has purchased T. J. Beall's grain and wool business at Horton, Kan., where he is carrying on business. He will also establish a branch office at Germantown.

The Omaha Elevator Co. has opened its elevator at Weston, Neb., which has been closed for most of the time for the past three years. The business is under the supervision of M. O. Worrall.

J. C. Kirkpatrick, of Kirk Station, Ill., has purchased Kaufman Bros' elevator at Penfield, where he will engage in the grain business, which will be managed by his son, J. B. Kirkpatrick.

The Planet Mill cooper shop at Litchfield, Ill., has been converted into an elevator, and a corn sheller, engine, dump, etc., have been added. It is under the management of R. S. Nelson.

R. M. Broughton has deeded his entire interest in his mill, feed and grain business at Poultney, Vt., to his son, W. W. Broughton, who has been partner with him, and who will continue the business.

Engler & Baker, who operated an elevator and conducted a large grain business at Fremont, Ohio, assigned recently to George Kinney. It is said that the assets more than cover the liabilities.

The firm of T. C. Edwards, composed of T. C. Edwards and L. W. Murdock, dealers in grain, feed and groceries, at Alvin, Texas, has been dissolved, Mr. Edwards purchasing Mr. Murdock's interest.

The Riverton Mills Co. of Norfolk, Va., has completed its new elevator, which is being operated in connection with the mill. It has a capacity of 25,000 bushels and it is operated by water power.

Houck & Gragg, grain dealers of Raymond, Ill., have completed the overhauling and remodeling of their elevator. New machinery has been added, including a Cornwall Corn Cleaner, dump, rope drive, etc.

B. A. and J. S. Hylton have engaged in buying and selling grain. The New Virginian of New Virginian, Iowa, says that their headquarters will be at Barney, but that they won't refuse carload lots at any station.

Parker Bros., grain dealers and general merchants of Waterville, Kan., have reorganized, sold out their general store and are conducting their grain business under the firm name of P. C. Parker & Co.

Nye, Jenks & Co. have emptied their 1,000,000-bushel elevator at Washburn, Wis., of coarse grain, having handled nearly 10,000,000 bushels of all kinds of grain in the season of navigation just closed.

George H. Rover's Sons, grain commission merchants of Cincinnati, Ohio, have dissolved partnership. The firm was composed of Henry and Harvey Rover, each of whom will continue the business separately.

Charles A. Holt of Billerica, Mass., writes us that he has sold his grain business to W. C. Phillips & Co., dealers in hay, coal, etc., at the same place. The latter company has incorporated Mr. Holt's business with its own.

The Johnston Grain Co. has been incorporated at Beason, Ill., with a capital stock of \$30,000. The incorporators are William Johnston, James Johnston, James Armstrong, Samuel O. McCullough and Charles D. Bowles.

The Galveston Wharf Co. have awarded the contract for the plans and specifications for the construction of its elevator at Galveston, Texas, to James Stewart & Co. of St. Louis, Mo. The storage capacity will be 600,000 bushels, capacity for un-

loading 200 cars a day, for loading vessels 36,000 bushels an hour. The house will be covered with corrugated iron and equipped with the best modern machinery.

John and R. Ross have formed a partnership and engaged in the grain business at Chalmers, Ind., where they have purchased an elevator. The firm name is Ross & Ross, and Scott Ross has charge of the company's business.

At Wichita, Kan., there are nine local grain companies and several branch houses of Kansas City grain firms, and it is said that on account of its large and growing grain business it is badly in need of a large elevator.

Geo. R. Ashman & Co., grain dealers of Gilman, Ill., have dissolved partnership. The members of the firm were Geo. R. Ashman of Gilman and R. F. Cummings of Clifton. It is said that Mr. Ashman will continue the business.

Extensive elevator facilities and docks will be established at Port Arthur, Texas, on the Gulf of Mexico, a new station on the Sabine River, and the terminus of the Kansas City, Pittsburg & Gulf R. R., which will be completed next spring.

The Chicago Great Western Co.'s new elevator at Kansas City, Mo., will have been completed by December 15. It was expected to have the elevator ready to receive grain by December, but delays occurred which put back the work two weeks.

The Pelican Rice Mill at Mermentau, La., is completed and in operation. The plant is thoroughly equipped with all the best modern machinery. Philip Rahm had the contract for the equipment and the millwright work was done by E. D. Shull.

The O. W. Clapp Co. has been incorporated in New York City with a capital stock of \$300,000, to continue the business of Clapp & Co., who assigned recently. The company will carry on a general commission business in grain, stock, etc., as before.

W. H. Marriner, grain dealer of Lisbon Falls, Maine, assigned recently to H. E. Coolidge. The liabilities are estimated at \$900, assets at \$500. The cause of failure is said to be inability to collect bills. The business will be continued by Fred. Harding.

H. Kurtz & Son, grain dealers of Greenville, Iowa, are building an elevator at Fontanelle, where they have already built an office. This branch of the business will be under the supervision of Willis Kurtz, and it is his object to handle live stock as well as grain.

Briggs & Co., grain and feed merchants of Newport, R. I., are completing a new elevator near their storehouse at that place. It has a capacity of 60,000 bushels and is equipped with all modern machinery. An electric motor is used to operate the elevating machinery.

Herbert M. Fuller's new grain store on Charles Street, Waterville, Maine, has been completed. It is arranged so that all grain will be kept stored in bins on the second floor, and these will be connected with the first floor by spouts. A water motor will be put in to run an elevator.

The copartnership between Albert Drews and Wm. Renitz, under the firm name of The St. Croix Grain Co., of Stillwater, Minn., has been dissolved by mutual consent. The business will be continued by O. Drews and G. A. Kelm under the firm name of St. Croix Grain Co.

Harroun Bros., grain dealers of Kansas City, Mo., have reopened an office at St. Joseph, Mo., which they closed about three years ago on account of switching difficulties with the Burlington and Rock Island roads. Harroun Bros. have a large elevator at St. Joseph which they will operate.

The well-known grain firm of McCaull, Webster & Co. of Aberdeen, S. D., who operate a large line of elevators in South Dakota and Iowa, have decided to remove to Minneapolis. They have leased headquarters for the company in the Corn Exchange Block and will occupy them about January 1.

The McMichael Elevator Co. has been incorporated at Des Moines, Iowa, with a capital stock of \$100,000, for the purpose of conducting an elevator and warehouse business in Iowa, South Dakota and Minnesota. The officers are T. M. McMichael, president; William McMichael, secretary, and W. G. Marling, treasurer.

Gordon Bros. & Co., formerly of the Lincoln Roller Mill, Lincoln, Ill., have organized to carry on a grain business at that place. Frank and James Gordon are the principal members of the firm, and both are enterprising young business men. They are having an elevator erected at Lincoln, and will have branch offices throughout the county.

Geo. N. Rheinhardt & Co., receivers and shippers of grain, hay, straw, flour and feed, located on the Port Morris branch of the Harlem Railroad, One Hundred and Sixty-second to One Hundred and Sixty-third Street, New York City, have finished remodeling their elevator

and warehouse. Another story has been added and other extensive improvements made, which gives them every facility for the prompt and satisfactory handling of their business. The elevator now has a storage capacity of 69,000 bushels, and the warehouse of 16,000 bales of hay.

The Texas Star Flour Mill of Galveston, Texas, will enlarge its elevator by erecting an addition of 300,000 bushels' capacity, giving the company a capacity of 700,000 bushels. Just at present the company contemplates improving its facilities for unloading cars and loading vessels, and will probably make improvements in its present system.

Henry G. Stahl and Harvey M. Cook have taken possession of the Star Elevator at Fremont, Ohio, and succeeded the firm of Engler & Baker, who assigned recently, in the grain and coal business. Mr. Stahl is the owner of the elevator, and carried on the business before it was leased to Engler & Baker. Mr. Cook has been superintendent of the elevator for a number of years.

William R. McQuillan, who has for many years been a member of the firm of C. S. Maguire & Co., who do a general grain business at Cincinnati, Ohio, has sold out his interests in that firm and become connected with the Union Grain and Hay Co., in which company he has charge of the receiving department. Mr. Maguire's son has taken Mr. McQuillan's place with Maguire & Co.

The Riverton Mill Co. of Riverton, Va., has completed a 30,000-bushel elevator to be operated in connection with its mill. The new elevator is operated by water power, the water being conveyed from the Shenandoah River, 300 feet away, the pressure being so great that a half-inch stream runs the entire elevator plant, including pneumatic carriage of grain to the mill.

A correspondent writes us that W. E. Hurd, of the firm of Owen Hurd & Sons' dealers in grain, hay, feed, etc., at Walton, Ind., has retired from that company and engaged in business for himself, dealing in grain and giving special attention to baling hay and straw. The business of the old firm will be continued by Owen Hurd and D. P. Hurd under the firm name of Owen Hurd & Son.

W. R. Johnson, who was appointed custodian of the J. L. Pumphrey property at Heyworth, Ill., shortly after the latter so mysteriously disappeared a year ago, was discharged by the court as custodian and appointed receiver of the same property, which will now be sold for the benefit of the creditors. Mr. Pumphrey was an extensive grain dealer. Not a word has been heard from him, and the belief is now general that he committed suicide.

William Binder, of the former firm of Binder Bros., grain elevators, is building an elevator at Spencer, Iowa. An injunction has been served by the Spencer Grain Company on Mr. Binder to restrain him from engaging in the grain business there, claiming an agreement was entered into when the Spencer Grain Company bought the Binders' stock in the old company that he would not engage in the business again. This Mr. Binder denies and proposes to build his elevator.

The Capital Elevator Co. of Topeka, Kan., has been placed in the hands of a receiver, D. H. Martin having been appointed to take charge of the company's affairs. Application for a receiver was made by the president of the company, Samuel M. Stanford of Minneapolis, Kan. The property involved amounts to \$40,000. The company has not been carrying on business since August 11, and it is said that Mr. Stanford petitioned for a receiver to stem a threatened tide of litigation to collect claims against the company. Creditors of the company have filed suits for the recovery of the value of grain stored in the elevator.

C. C. Aldrich's new elevator at McLean, Ill., is completed. The elevator was built expressly for handling ear corn. The dimensions are 27x56x32 feet, divided into eight bins, having a combined capacity of 20,000 bushels. It is a substantial structure, built of Louisiana hard pine and rodded from top to bottom. The building is traversed lengthwise through the center by an endless chain conveyor, which will distribute the corn into the bins from the top as it leaves the elevator. The conveyor, passing through the center below, carries the corn back to the sheller on the lower floor of the main elevator building, where it is shelled.

An extension of 83 feet is being built on the Nickel Plate Transfer Elevator at Ninetieth St., and the tracks of the N. Y. C. & St. L. R. R., Chicago, by the Chase Elevator Co. Four of the S. Howes Co.'s Eureka Oat Clippers, and four Morgan Oat Clippers will be added, so the house will have 11 clippers, with a clipping capacity of 80 cars in 20 hours, also a transferring capacity of 200 cars in 24 hours. There will also be a car puller and steam shovels, and eleven Cyclone Dust Collectors. A new steam plant is being added, with a 160-horse power engine. Two 60,000-pound hopper scales will be placed on the first floor. The Sykes Steel Roofing Co. supplied the roofing.

WATERWAYS

The marine insurance companies refused to cover any more vessels December 9, and navigation was virtually closed.

The biggest cargo of grain ever taken from Philadelphia, 150,000 bushels of corn, was recently loaded into the steamer Nordhvalen, I. M. Parr & Co. consigning it to Denmark.

It is reported that during November traffic on the Sault Canal included 15,373,340 bushels of grain and 1,768,366 barrels of flour. The total traffic of the month was 1,557,912 tons.

Navigation practically closed at Montreal, Canada, November 21, when the last vessel left. The season's shipments include a total of 6,905,702 bushels of wheat and 6,481,420 bushels of corn.

The first grain cargo in 15 years to leave the port of Baltimore in a sailing vessel was taken from that port on November 24 in the schooner Wm. B. Palmer. Part of her cargo consisted of 32,000 bushels of wheat.

Shipments of grain from Duluth and Superior during the season just closed were as follows: Wheat, 47,095,734 bushels; corn, 453,182 bushels; oats, 4,328,223 bushels; rye, 1,215,459 bushels; barley, 6,560,511; flax, 5,580,797.

Grain receipts at Buffalo for this season to December 1, when navigation on the Erie Canal closed, exceeded any previous year's receipts by about 2,000,000 bushels, the total amount being 154,338,921 bushels, against 132,808,238 bushels in 1893, which year held the former record.

The steamer Queen City has again broken the record for large Lake Superior cargoes, having taken a load of 66,383 bushels of oats, 50,360 bushels of corn, and 95,326 bushels of wheat, 5,328 tons. There have been some big lake cargoes this season, made possible by a deeper channel at Sault Ste. Marie.

However unsatisfactory winter storage of grain in vessels proves to be, there seems to be no diminution of the practice this year. About 1,000,000 bushels of grain and some flaxseed have been forwarded from Duluth to be held at Buffalo, the rate being 3½ to 4 cents. And this is only a small part of the amount that will be so stored.

There is a report that a company has been formed in New York with a capital stock of \$1,000,000, to build a fleet of steel canal boats for traffic on the Erie Canal, erect elevators, etc. The names of all the prominent men who could possibly have any interest in the project are mentioned in connection with this scheme, which, however, is only a report.

Among the damages to the cargoes of lake steamers last season were, to the grain cargo of the steamer C. W. Elphicke a loss of \$3,000; to the grain cargo of the steamer C. A. Eddy, \$724, and to the cargo of the steamer J. Emory Owen, \$270. These losses, it is said, will fall upon the owners of the steamers, as the underwriters established the fact that the steamers were not in proper condition for carrying grain.

At a recent meeting of the Ohio Valley Improvement Association held at Pittsburg the question of a ship canal from Lake Erie to the Ohio River was discussed, and the Association called for speedy action on a resolution which will be presented to Congress. This is the old scheme for a waterway from Pittsburg to Lake Erie, the object of a company with a large capital stock which wants Congress to stand the expense.

The season of navigation just closed has been an interesting one, witnessing an unprecedented grain movement, freight rates from the lowest on record to a fair average, larger ships and record-breaking cargoes, together with important improvements in waterways. Next season will probably be more interesting, when it will be seen what will be done with a 21-foot channel connecting Chicago and Buffalo, and deeper water in the connecting channels between Lakes Superior and Huron.

While the people who deposited the \$200,000 necessary to secure the right to construct the Cape Cod Ship Canal 10 years ago, and who did some good work upon it, were seeking to recover their money through the courts, the combination of capitalists controlling the charter of the Massachusetts Maritime Canal Company have been depositing the same amount with the State Treasurer. It is said that work on the canal will begin again. The preliminary plans have already been prepared and approved by the joint boards of railroad, harbor and land commissioners. The act passed by the last legislature requires that the construction of the canal shall be commenced within eight months after June 9, 1896, and that it shall be completed within five years from that date. The canal is to begin at some point in Buzzard's Bay, running through the towns of Bourne and Sandwich, or either of them, to some convenient point in Cape Cod or Barnstable Bay. It is to have a depth of not less than 25 feet at mean

high water, a width of not less than 100 feet at the bottom, and with a surface width of not less than 200 feet.

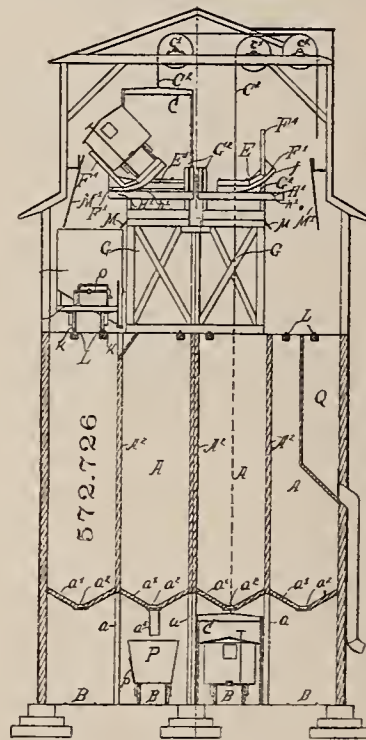
The Chicago River and Harbor Improvement Association has sent a representative to confer with the Secretary of War and ascertain how the \$650,000 appropriated for the improvement of the Chicago River is to be expended. If the Secretary rules that the money is to be spent in dredging, an attempt will be made to secure an amendment to the law to allow the money to be used for widening and straightening as well as deepening the stream. The chief objection to navigation of the river is the tunnels, which must be lowered, and the sooner the better.

The season of navigation on the Erie Canal closed December 1, and the work of improving the channel immediately began at Buffalo. New York papers are discussing the improvements under the appropriation of \$9,000,000, and one says that in view of the great increase in traffic through the St. Marys River and Canal "it seems remarkable that all that New York proposes to do to retain the big grain traffic which comes to her through the lakes is to deepen the Erie (Oswego) and Champlain canals by only 2 feet. For the Empire State to have shown a curious indifference to her own business interests seems incredible, indeed."

SEELEY'S NEW DESIGN FOR GRAIN ELEVATORS.

On December 8 a patent was granted to Marquis F. Seeley and Jennie Y. Seeley of Chicago, for what is called a grain storage elevator. Mr. Seeley is the senior member of the firm of Seeley, Son & Co. of Fremont, Neb. It is unique in that the loaded car is elevated to the top of the house before its load of grain is dumped. This method has been used in the handling of coal, but has not been given a practical test in the handling of grain. If the cost of elevating the heavy car is not too great, this idea might be utilized to advantage in facilitating the handling of grain and especially in transferring the grain from car to car.

The claim in the letters patent is for "a structure for elevating and storing grain, comprising storage



bins, a vertically movable elevator platform, a tipple located above the level of the bins, said tipple comprising a platform which is movably supported in such manner as to tip both sidewise and endwise, track rails also located above the bins, and a wheeled hopper resting on the track rails."

The loaded car is elevated to the top of the house and emptied of its load by being tipped. The grain falls from it to the weigh hopper, in which the grain is weighed, and then dumped into any bin desired. The weigh hopper rests on heavy wheels so it can be pushed about the upper part of the house on rails and its load delivered to any bin. It can also receive a load from either tipple. The construction is very simple and convenient, as is shown in the illustration.

A strong argument in favor of the use of the metric system here is that by common consent all over the civilized world it has been adopted by chemists and men of science. This has done a great deal toward making chemistry an international science and promoting the easy exchange of experiences and the rapid diffusion of new discoveries. The advantages gained in this direction are sufficient to show how much we would profit by the general adoption of the system.—Engineering and Mining Journal.

CROP REPORTS

[Readers will confer a favor by sending us reports each month of the acreage and condition of growing crops, the amount of grain and hay in farmers' hands and stocks in store, for publication in this department.]

VIRGINIA.—It is estimated that there is still in the hands of Orange County farmers from 15,000 to 20,000 bushels of wheat.

POTATOES.—The Orange Judd Farmer estimates that there is a shortage of 52,000,000 bushels in the potato crop of the United States.

MICHIGAN.—The Michigan crop report for December says that the average condition of wheat December 1 was 91 per cent. of condition in average years. This is 9 per cent. above condition December 1, 1895. All pasture has been good and live stock is in fine condition.

ILLINOIS, Bloomington, McLean Co., Dec. 4.—A wheat grower in this county said Monday that the acreage of winter wheat this fall is greater than last year, probably greater than usual. The weather has been favorable for it so far and the grain looks prime. There is very little old wheat left in the county. A resident of Dale Township, where considerable wheat is raised, gave it as his opinion there was not a bushel of good wheat in the whole township.—Pantagraph.

WASHINGTON, Nov. 25.—Chief Grain Inspector P. W. Lawrence says: I should judge that from 75 to 80 per cent. of the wheat grown this season in the state has already been sold. The disposition of the farmers who are still holding wheat is to hold until the price reaches 75 cents a bushel. The volume of wheat sold will be soon delivered. The receipts are already falling off. Prospects for next year are for an increased acreage in this state. Our acreage will be full sown without a question of a doubt.

TEXAS.—The State Agricultural Bureau reports that the severe cold weather with freezing temperature generally throughout the state was very detrimental to farming operations, and farm work as a rule has been at a standstill. The freeze on the morning of December 2 over the sugar region injured a great deal of sugar cane where uncut. Some corn is yet to be gathered. It is believed that the severe freeze over north Texas has injured winter oats slightly and checked the growth of wheat to some extent.

FARM PRICES.—The returns of the statistician of the Department of Agriculture for the month of December show the average farm price of the various products of agriculture on the first day of the month to be: The farm price of corn, as indicated, averages 21.4, against 25.3 cents last year; average price of wheat, 72.7 against 50.9 last year; of rye, 40.3 against 44 last year; of oats, 18.6, against 19.9 last year; of barley, 32.2, against 33.7 last year; of buckwheat, 39.1, against 43.2 last year; of Irish potatoes, 23.7, against 26.6 last year; hay, per ton, \$6.54, against \$8.35 last year.

KENTUCKY.—The State Commissioner of Agriculture issued his monthly crop report December 9, in which he says of wheat: The unusually favorable condition for the wheat crop was maintained without interruption until November 28. During that time the growth was unprecedented and a vigorous condition was firmly established. The condition of the growing crop up to that time was 101, but the severe weather immediately after November 28 probably reduced the percentage several points. Five counties out of 102 that have reported mention severe damage to early wheat by the fly.

OHIO.—The report of the Ohio Department of Agriculture for December 1 shows the condition of autumn sown wheat to be 94 per cent.; damage by Hessian fly 3 per cent.; damage by white grub worm 1 per cent. The corn crop is estimated at 119,547,107 bushels, from 2,904,815 acres, averaging 41 bushels; 86 per cent. cut up for fodder. Probable yield of clover seed 47 per cent. compared with average; of apples, 63 per cent. Estimated yield of potatoes 86 bushels per acre. Owing to the fear of cholera, which has been more generally prevalent than usual, many feeders of hogs shipped out their bunches before being properly fattened. Stock dogs are scarce. Pastures have held out well. There is a tendency among farmers to replenish their sheep, and there is now some demand for good ewes.

GOVERNMENT CROP REPORT.—The December report of the Department of Agriculture shows the condition of winter wheat, December 1, averaged for the country 99.5 per cent., as against 81.4 in 1895, 89 in 1894, and 91.5 in 1893. In the principal winter wheat states the percentages are as follows: Ohio, 101; Michigan, 90; Indiana, 100; Illinois, 99; Missouri, 101; Kansas, 103; Nebraska, 93; California, 97. The returns make the acreage of winter wheat just sown 105.2 per cent. of the area harvested in 1896. This estimate, which is preliminary to the completed estimate of June next, makes the area sown for the harvest of 1897 23,986,470 acres. Conditions for fall wheat seeding throughout Europe, except in France and southern Russia, reported gen-

erally favorable. Increase in acreage probably not great.

CORN IN OREGON.—The Oregon corn crop is unusually good this season, the warm, open fall enabling it to ripen in good condition. The area planted to corn is increasing each year, and in some parts of the Willamette Valley it is getting to be an important crop with the farmers.

KANSAS.—The Kansas Board of Agriculture has issued its final crop report, showing yields of the more important crops grown in the state in the year 1896. The total yield of winter wheat is 27,153,365 bushels, or 11,641,124 bushels more than in 1895. Its total value is put at \$13,016,229, the average per acre for the entire state being 8½ bushels. The corn crop is 221,419,414 bushels, 19,962,018 bushels more than last year, the average being 28.06 bushels per acre. Its value is \$35,632,013, as against \$46,169,772 for the previous crop. Of oats the yield is 19,314,772 bushels against 31,664,748 bushels the year previous. The yield per acre was but 13.06 bushels per acre and the value of the crop \$2,706,652. Spring wheat shows a yield of but 601,523 bushels. The total acreage now sown to winter wheat is reported as 3 per cent. less than one year ago; forty-two counties show an increase, ranging from 2 per cent. in Sheridan and Waubannsee to 3 per cent. in Bourbon, while forty-nine counties show a decrease from 2 per cent. in Woodson to 87 in Stanton. The average price for the year is given as 65 cents per bushel.

WILL SUCCEED THE UNITED ELEVATOR CO. OF ST. LOUIS.

The Consolidated Elevator Co. has been incorporated at St. Louis, Mo., to succeed the United Elevator Co. It has a nominal capital stock of \$1,000, which will be increased to \$1,000,000, of which \$500,000 will be preferred stock. The incorporators of the company are: Breckenridge Jones, Henry S. Potter, J. B. M. Kehlor, H. F. Langenberg, A. L. Shapleigh, C. A. Stockstrom, Peyton Carr, William P. Kennett and Charles A. Cunningham. At a recent meeting the following officers were elected: Breckenridge Jones, president; J. B. M. Kehlor, vice-president, and Henry Potter, secretary. These officers are temporary; another election will be held when the organization is completed.

This marks the last stage in the varied and interesting history of the United Elevator Co.

The company was organized in 1889, and after incorporation Webb M. Samuel was elected president, B. L. Slack secretary, and Chas. A. Cunningham assistant secretary. The incorporators were: Webb M. Samuel, J. B. M. Kehlor, George W. Updike, D. P. Slattery, John R. Lionberger, Hugh Rogers, R. P. Tansey, S. R. Francis, James Y. Lockwood, S. E. Hoffman, Redmond Cleary, John Wahl and B. L. Slack. The capital stock was \$2,465,000, and \$1,232,500 of bonds were issued. The following elevators were included in the consolidation: Merchants' "A," Merchants' "B," St. Louis, Central "A," Central "B," Union Depot, Venice, Union, East St. Louis and the Valley. Toward the latter part of 1889 the company took charge of the Advance elevator, increasing the capital stock \$220,000, and issuing \$110,000 additional bonds. This made the capital stock \$2,685,000 and the total bonded indebtedness \$1,342,500.

The business continued to flourish, and during the latter part of 1894 and the early part of 1895 the company carried in the neighborhood of 6,000,000 bushels of wheat, a proportionate stock of oats and a large amount of corn. The St. Louis United Elevator Company was counted one of the solid institutions in the city. The company had at the previous annual meeting declared a dividend of 2½ per cent. and the stock was worth \$70 per share. But this seemed to be the turning point. Expenses accumulated and business began to fall off owing to the short crop of red winter wheat. The elevators began to close and the stock to decline. Then in May, 1895, a shortage estimated at 300,000 bushels was discovered, when wheat was at the highest price of the year.

In July, 1895, W. T. Anderson was elected president of the company, and so reduced expenses that it was hoped the company would get on its feet again. But the cyclone destroyed so much of its property that all hope was gone, and a receiver was applied for. Ex-Governor D. R. Francis was appointed receiver. A number of suits were filed against the company, and C. H. Albers was made receiver for the Advance Elevator. Several reorganization schemes were proposed, and finally the one which resulted in the organization of the Consolidated Elevator Co. was adopted, and bids fair to be successful, if nothing unforeseen arises. The mortgages on the various elevators will be foreclosed and the property bought in by a trustee for the new company.

The Pacific Coast Steamship Co. has announced an increase of 25 cents a ton on wheat from Tacoma to San Francisco.

The EXCHANGES

Toledo Produce Exchange memberships are selling at \$60.

Memberships to the Duluth Board of Trade are selling at \$75.

Tickets of membership to the Detroit Board of Trade are selling at \$50.

Memberships in the Minneapolis Chamber of Commerce are selling at \$215.

Tickets of membership to the Chicago Board of Trade are selling at \$850.

Tickets of membership to the Peoria Board of Trade are selling at \$125.

Tickets of membership to the New York Produce Exchange are selling at \$700.

Memberships in the Milwaukee Chamber of Commerce are selling at \$85 to \$90.

Seven memberships in the New York Produce Exchange were recently sold at auction at prices ranging from \$210 to \$240.

Col. Thomas F. Beaty, who recently died at Elgin, Ill., was Secretary of the Chicago Board of Trade and Chamber of Commerce in 1863.

William Thurston, secretary of the Buffalo Merchants' Exchange, reports that tickets of membership are selling at \$100, unless a member is leaving the city, when he sells at about \$70, if for a full year.

The directors of the Chicago Board of Trade are vigilant as ever in regard to members who affiliate with bucket shop men. Members of a grain commission firm were cited to appear before the board recently to answer the charge of having relations with a bucket shop.

The directors of the Chicago Board of Trade are making some effort to stop the practice indulged in by some members of circulating fictitious reports. A member was recently suspended for 30 days for setting in circulation rumors affecting the financial standing of another.

The annual election of the Montreal Board of Trade will be held next month. There has already been considerable speculation as to who the next president will be, especial importance being attached to the office on account of the change in the government's administration.

The following members of the Chicago Board of Trade have been appointed delegates to the annual meeting of the National Board of Trade, which convenes in Washington on Jan. 26, 1897: H. F. Dousman, Richard S. Lyon, Frank G. Logan, C. B. Congdon, Luther W. Bodman, George F. Stone, B. A. Eckhart, John C. Hatley, Jerome G. Steever, and B. Frank Howard.

The New York Produce Exchange has asked its Board of Managers to petition the Department of Agriculture at Washington to issue the regular monthly grain crop reports at an earlier hour in the day than is now done, and suggests that the hour be changed from 4 p. m. to 1 p. m. At present it is not given publicity until about 3 p. m., which is after the regular grain session on 'Change.

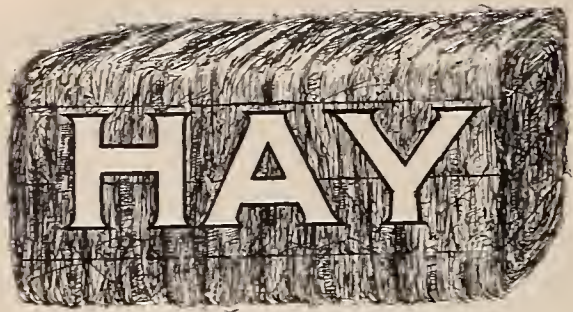
The proposed rule requiring all members of firms using the Chicago Board of Trade Clearing House to become members of the Board has been adopted by a vote of 610 to 24. It puts the burden of expense for maintaining the Clearing House on more shoulders, and makes all firms more responsible in the matter of supporting the rules and regulations. The directors adopted a rule compelling every business house making clearings, and the individual members thereof, to be registered at the clearing house.

OUR CALLERS

We have received calls from the following gentlemen prominently connected with the grain and elevator interests, during the month:

E. A. Grubbs, Greenville, Ohio.
E. S. Greenleaf, Jacksonville, Ill.
M. McFarlin, Des Moines, Iowa.
W. H. Chambers, Hepburn, Iowa.
J. Silas Leas, of the Barnard & Leas Mfg. Co., Moline, Ill.
Geo. W. Brown, representative of the Nordyke & Marmon Co., Indianapolis, Ind.
J. L. Wheeler, representing The Howes Grain Cleaner Co., Silver Creek, N. Y.
H. Hamper, Greenville, Mich., representative of The S. Howes Co., Silver Creek, N. Y.

The salvage on the grain damaged in the burning of Elevator "A" at St. Paul was sold for \$1,000.



It is a wise shipper who knoweth his own commission man.

Elevators are provided at terminals for grain, why not warehouses for hay?

T. D. Cunningham, dealer in hay, etc., at Pocatello, Idaho, sustained a loss by fire recently.

The commission man who is liked by the buyers will in his turn be liked by the shippers.

Henry C. Miller has purchased Elbert Perry's hay baling establishment near Washington Grove, Md.

A. Turnquist has engaged in the hay and feed business at Bayfield, Wis., where he has opened a store.

Not since 1878 has hay been so low as it was in 1895. In 1878 it touched \$7.21 per ton, and the lowest in 1895 was \$8.35.

Shippers should not presume that because the commission man is careful and painstaking they have no need of exercising judgment in baling and shipping carefully.

Walker, Chittum & Co., hay dealers of Kansas City, Mo., are again occupying the Interstate Warehouse at that place, whence they had removed to 215 East Fifth street.

One of the most difficult things about the commission merchant's business is to know when to "let go," to know how to ask enough, but neither too much nor too little.

W. E. Jones recently engaged in the hay business at Kansas City, Mo., but after a short experience retired, saying that the business was not large enough to warrant his continuing it.

L. Daube, wholesale dealer in hay at 204 W. Lake street, Chicago, sustained severe loss by fire November 30. The fire was first discovered in baled hay stored in the rear of his building, and the principal loss was on the hay destroyed.

Isaac J. Gruber of Marion, Conn., who entered into partnership in 1894 with Allison and Ira G. Millisor for the purpose of carrying on a hay and straw baling business, has sued for a dissolution of partnership and for the appointment of a receiver.

Downing & Norton is the name of a new firm of hay and straw receivers, at Palmer's Dock, Brooklyn, and 251 West Thirty-fourth street, New York. They solicit consignments from farmers and shippers, and accept all drafts on arrival and inspection of goods.—Hay Trade Journal.

The following rules may occasionally be found useful: To find the cubic feet in a circular stack of hay, multiply the square of the circumference by four one-hundredths (.04) of the height. In loads the number of tons of hay is found by multiplying together the length, width and height in yards, and dividing the product by 20.

One reason, it is claimed, why timothy hay is a favorite in the markets is its uniformity of quality. Not being so nitrogenous as clover, it is much less likely to be injured by being wet and heating. The variation in quality is mainly due to early or late cutting, though some livery stable keepers prefer the fully ripened timothy, which is least nutritious because the horse likes the timothy seeds. Clover hay is apt to become musty and dusty if it has been exposed to fermentation. Timothy hay will not be dusty unless cut in the bloom, and the dust is not so injurious as that from partly decayed clover.

The Trade Bulletin of Montreal, Canada, whose special predilection for the hay trade of that country is very excusable, has made many complaints during the past year. Its latest is that "exporters of hay in this city have repeatedly complained of the disability they labor under in filling orders for export. A case occurred recently, in which an order was executed for three cars of hay, and when it arrived at destination, in New York state, the purchaser wanted a reduction of \$3 per ton, on the ground that the quality was not up to standard." According to report the shipper sent a man over the line to inspect the hay, who, finding that the demand for a reduction of \$3 per ton was groundless, proved it by selling the hay to other parties. The Montreal journal says that "the buyer thought that as the hay had arrived, the party in Montreal would have to accept whatever claim was made upon him on the score of quality or otherwise. In this case, however, the result was

different from that expected by the purchaser of the hay, and it might be profitable if other shippers to the United States acted in the same way as the party above referred to."

A funny incident occurred at the first convention of the National Hay Association, which, as related at the recent meeting at St. Louis, is as follows: One of the members in good standing had bales of hay on exhibition, and invited other members in "to see some good baling." From a pile of bales he pulled down one which was apparently choice timothy, and said: "This is the side we sell by." The bale was turned over and was seen to be all clover and weeds on that side. "That," he said, "is the side we don't show." What this expert baler supposed the Hay Association was organized for it is difficult to say.

The November report of the Department of Agriculture says: Notwithstanding the numerous reports of damage to the hay crop by drouth during the growing season, and wet weather during harvest, the average yield per acre, as indicated by the preliminary returns, is 1.36 tons, against 1.06 a year ago. The largest yields per acre are returned from Idaho, 3.26; Washington, 3.09; New Mexico, 3; Utah, 2.97, and Colorado, 2.37 tons. In these states, however, a large portion of the hay is made up of alfalfa, which with irrigation gives two and even three crops a year, making possible a very much higher average yield than that of the cultivated grasses of other states.

The benefit of a local hay association to both dealer and shipper is strikingly illustrated by the history of the Kansas City Hay Dealers' Association. Before its organization hay was weighed by everybody who received it in all quarters of the city. The result was numberless complaints by country shippers of short weights, giving endless trouble to all interested. The Kansas City Association had a hard task before it, but it has ameliorated the conditions of the trade as only an association could do. Now all hay received by members and unloaded from team tracks is weighed over the Association's scales, the inspection is as good as it is at any market, and complaints of any kind have been largely diminished. There are other local associations, of course, and there are good markets which need one badly.

The report of the Merchants' Exchange of the receipts and shipments at St. Louis, Mo., for November shows a considerable falling off in hay as compared with November, 1895. The falling off in the hay business was caused, according to one authority, "principally by the continued rains of the end of the season, which spoiled in a great measure the biggest crop of hay that has been raised for years. Great quantities of ill-conditioned hay were put on the market, which hurt prices and deadened the movements of the whole crop. Local feed dealers complain bitterly of railroad discrimination on freight rates from the hay fields of Western Missouri and Kansas, and the Kansas City, Springfield, Memphis and Birmingham people are said to be perniciously active in giving St. Louis the worst of the freight rates."

A farmer of Pretty Prairie, Kan., writes that this season he had 350 acres of alfalfa, which was sowed last year. The owner has 1,000 bushels of seed, which will bring \$4,000. He has also at least \$1,000 worth of hay, at a low figure, making \$5,000 worth of crop from 350 acres—nearly \$15 an acre. The first crop of seed grown this way is prime, containing no foxtail or other weed seed, whereas seed grown on old ground is always more or less foul. Another thing, there was no rain from January till June, and then none from July 25 to September 10. Farmers have sowed largely this fall and will sow more in the spring, as that is considered the better time. Kaffir corn is also bound to displace corn to a great extent. It seems to be absolutely a sure crop. It produces more seed to an acre than corn, and the feeding value is as high as corn.

SPONTANEOUS COMBUSTION OF HAY.

Professor Pammel of the Agricultural College, Ames, Iowa, recently received the following query: "Will you please send by return mail all the information you can give in regard to spontaneous combustion of hay, fodder, millet, etc.? Our Farmers' Mutuals are here in convention, and it is one of our questions. Its importance is great, as many barns have been burned with supposed combustion. Any information as to the cause and remedy will be gladly received by the farmers of Iowa."

In his reply he stated that we are only concerned in that form of spontaneous combustion supposed to be caused by living organisms. The problem confronting us is something like this: Clover hay, timothy and other substances containing moisture undergo changes. These changes are in large part brought about through the action of bacteria and molds. It is a well-known fact that many bacteria, when occurring in the living body, produce as a result of their attacks a rise in temperature. They thrive readily at temperature of the blood, and a little above. They are parasitic, but many saprophytic species do not even reach their optimum growth at 104, but between 130 to 150, Fahrenheit,

and a somewhat higher maximum growth. Some molds, like *Aspergillus fumigatus*, frequently found in moldy hay, have their optimum growth, as I remember, about 135 Fah. Now, what takes place when the organisms are growing? A combustion of the products, and as a result heat is produced. The haymow often becomes uncomfortably hot, but it is far from the point of ignition. Many bacteria have the power of producing free hydrogen gas, and this is inflammable in the presence of free oxygen. The imprisoned gas sometimes explodes with force, as has been shown in laboratory experiments. Carbonic acid (carbondioxide) is also frequently produced by bacteria. Cohn, in one of his papers, gives several illustrations of spontaneous combustion of oil seed cake and hay. I see no reason why this cannot sometimes occur, though I think they are not so frequent as generally supposed. The only course to pursue is to have the hay well cured before it is put in the mow. With the cheapness of hay caps, much of the curing can be done in the field, and when hay is properly cured there need be no fear of combustion.

REVIEW OF CHICAGO HAY MARKET.

The prices for hay ruling in the Chicago market during the last five weeks, according to the Trade Bulletin, were as follows:

During the week ending November 11 the receipts of hay were 4,191 tons, against 5,598 tons the previous week. Shipments for the week were 603 tons, against 590 tons for the previous week. The market for Timothy Hay ruled very firm. Arrivals small and demand good, principally on local account. Prices advanced 50@75 cents per ton. The offerings of Prairie Hay were only moderate and a fair inquiry existed, especially for the best grades. Low and medium grades were a little slow. Prices showed no material change, though the scarcity of Timothy Hay caused a steady feeling to prevail. Sales of Choice Timothy ranged at \$9.50@10.75; No. 1, \$9.00@10.00; No. 2, \$7.50@8.50; not graded, \$7.00@10.00; Clover Mixed, \$8.00; Choice Prairie, \$7.50@8.50; No. 1, \$6.50@7.75; No. 2, \$6.00@6.50; No. 3, \$4.50@5.25; No. 4, \$4.50; rye straw sold at \$5.00@6.00.

During the week ending November 21 receipts were 5,650 tons, shipments 568 tons. The offering of Timothy Hay were rather small, and a good inquiry existed. Prices ruled firm. Later, the arrivals increased and the demand was less urgent. The market became dull, especially for low and medium grades, and an easier feeling prevailed. Prairie Hay was in large supply early in the week and the market ruled dull. Toward the close the receipts fell off and the demand improved. Prices exhibited no material change, though the market closed firm. Sales of Choice Timothy ranged at \$10.00@11.00; No. 1, \$9.00@10.25; No. 2, \$8.00@8.50; No. 3, \$7.75; not graded, \$6.00@9.25; Choice Prairie, \$7.75@8.75; No. 1, \$7.00@7.50; No. 2, \$6.00@6.50; No. 3, \$5.00@5.50; No. 4, \$4.00@4.50. Rye straw sold at \$5.50@6.15, and oat straw at \$5.00.

During the week ending November 28 receipts were 5,582 tons, shipments 318 tons. Choice grades of Timothy and Prairie Hay were in fair demand, and a steady feeling prevailed. Poor and medium grades were in large supply and the market ruled very dull. Scarcely any demand, and receivers found it almost impossible to effect sales. During the closing days of the week the arrivals of all descriptions increased, and with no improvement in the demand the market became very dull for all grades. Prices declined 25@50 cents per ton. Sales of Choice Timothy ranged at \$9.50@10.75; No. 1, \$8.50@9.50; No. 2, \$7.50@8.50; No. 3, \$6.00@7.50; not graded, \$5.00@7.50; Choice Prairie, \$7.75@8.50; No. 1, \$7.00@8.00; No. 2, \$6.00@6.50; No. 3, \$5.00@6.00; No. 4, \$4.00@4.25. Rye straw sold at \$6.00@6.25, and oat straw at \$4.25@5.00.

During the week ending December 5 receipts were 5,904 tons, shipments 556 tons. A steady and firm feeling prevailed. The arrivals were only moderate and a rather good local inquiry existed, especially for the choice grades. Medium grades sold a little more readily on account of light supply of choice. Demand for shipment was also a little more active. Prices showed no material change. Sales of Choice Timothy ranged at \$10.00@10.50; No. 1, \$8.50@9.50; No. 2, \$8.00@9.00; No. 3, \$6.00@7.00; not graded, \$5.00@9.00; Choice Prairie, \$7.75@9.00; No. 1, \$6.50@8.00; No. 2, \$6.00@6.50; No. 3, \$5.00@5.50; No. 4, \$4.50@4.75. Rye straw sold at \$5.50@6.50, and oat straw at \$5.00.

During the week ending December 12 receipts were 5,542 tons, shipments 470 tons. The market for both Timothy and Upland Prairie ruled steady during the early part of the week. The arrivals were only fair and a moderate inquiry existed. Later, the receipts increased very materially, especially of Timothy Hay, and the demand became light. Local dealers took hold sparingly and shippers were doing next to nothing. Prices declined about 50 cents per ton, and the market closed dull at the reduction. Sales of Choice Timothy ranged at \$9.50@10.50; No. 1, \$8.50@10.00; No. 2, \$7.00@8.50; No. 3, \$6.00@6.50; not graded, \$5.00@9.75; Choice Prairie, \$8.00@9.00; No. 1, \$7.00@8.00; No. 2, \$6.25@7.00; No. 3, \$5.00@5.50; No. 4, \$4.50. Rye straw sold at \$5.50@6.50, and oat straw at \$4.50@5.00.

PRESS COMMENT

AN ECHO.

The Grain Dealers' National Association has put itself emphatically on record as approving of methods for promoting better feeling between shippers and carriers. In making or proposing changes they will studiously seek to subserve the interests of railroads in subserving their own.—Pioneer Press, St. Paul.

THE BICYCLE AND THE FEED BUSINESS.

A Canadian contemporary is getting alarmed over the growing use of the bicycle and the relegation of the horse to a condition of "innocuous desuetude." The bicycle eats nothing in Canada, and is therefore making serious inroads into the business of certain feed dealers. The millers haven't commenced to complain yet.—Miller's Review.

DIVERSION OF THE GRAIN TRADE SOUTHWARD.

The rapid increase of the export grain trade through Southern ports necessarily draws a large share of that business away from New York, which formerly monopolized it, and this diversion is causing a vast amount of grumbling and dissatisfaction among the merchants of that city. This drawing away of New York's grain trade is caused entirely by the fact that there are other ports more advantageously situated, by reason of being nearer to the grain fields, and, as the costs of transportation to them are less, and those ports possess excellent terminal facilities for the transfer of cargoes from railways to ships, those ports are getting the grain for export.—Picayune, New Orleans.

CLEAN BILLS OF LADING.

Railroad companies would do well to accept the inevitable. Clean bills of lading for grain are bound to come, and it is the part of wisdom to accept the situation and provide for their adoption in such manner as will be to the mutual interests of the parties concerned, instead of attempting to fight the proposition, and thereby engender an opposition which will manifest itself in legislation, in which the burdens will be placed upon the carrier. In this matter the shippers have right on their side, an advantage of which they are fully conscious. It is for the railroads, therefore, to recognize that the odds are against them and make such provision as will be fair to both parties.—Railway Review.

THE INTERNATIONAL WHEAT TRUST.

The proposition to hold an international conference to fix the price of wheat is one of interest. There can be no particular objection to the holding of such a conference, but the chance of accomplishing the object sought is rather remote. It is not denied that the price of wheat, like that of other commodities, may be regulated within certain limits by operating through the law of supply and demand. The trouble is that both are, to a considerable extent, beyond control. The acreage sown in wheat might indeed be prescribed by agreement, could such agreement be attained. But the amount of wheat that such acreage will produce is beyond human control, and nobody is able to predict it.—Courier Journal, Louisville, Ky.

LOANS FOR GRAIN PRODUCERS.

Some of our contemporaries have been cautiously toying about the edges of the question raised by recent loans at the hands of the Russian government for the benefit of grain producers. Just as there is no sentiment in business so there is no chance for philanthropy in trade, nor excuse for unusual and novel generosity in finance. In this Russian loan scheme we see the old, inviting and dangerous proposition to squander before we earn, which system never made a people rich nor a nation secure and great. Instead, it puts a premium on discontent, and would, if such could be, raise to the dignity of honest purpose a proposal to discount future prosperity by engaging in a carnival of debt-making on a basis that professional gamblers would deem hazardous.—Modern Miller.

ONE OF NEW YORK HARBOR'S DRAWBACKS.

The harbor of New York is so large and competition in shipping has been carried on so many years that ocean vessels can get loads in a dozen or a score of different places on the shores of that harbor. This compels the railroads, at considerable expense, to carry grain to the ships in lighters. It is true that this custom of carrying grain to the ship originated with the canal-boats, which can go to one point of the harbor as well as to another, but the railroads seem to be forced to conform to the custom nevertheless. On the other hand, Boston and Baltimore and Newport News have cheap facilities for the rapid transfer of grain directly from the cars to the ocean vessel. There are simi-

lar cheap transferring elevators in New York harbor, but, as already stated, the customs of trade have become so settled that the ocean vessels do not go to them.—Railroad Gazette, New York.

STORAGE RATES AT GALVESTON.

The directors of the Galveston Wharf Company have decided to advance the elevator charges on grain stored from ¼ cent per bushel for each 15 days over the free period of 30 days, to ½ cent a bushel for each 10 days' storage after the free period. The charges for receiving and forwarding grain will remain as heretofore.

The wharf company has not the room necessary to store large quantities of grain, and their action was seemingly justified as an incentive to shippers to get their grain out of the elevator during the 30 days following its receipt.

DEMAND FOR CASH WHEAT.

The wheat markets continue to show wide fluctuations and they may be expected to do so in the future. This condition comes from the unusual demand for the cash property. When the markets are led by speculation in futures, the futures set the pace for cash offerings to follow. Now on the contrary it is the latter that lead and the futures are adjusted to meet them. Every great primary center, where receipts are large, is called upon to contribute to the general demand. Winter wheat comes out slowly and now the circumstances have changed with spring, that moved so freely, which will render its movement slow as well, and with the large demand and unsatisfied inquiries short selling has lost much of its former charms.—Minneapolis Market Record.

BETTING ON FUTURES.

Thousands upon thousands of men in this country have for years squandered their own and other people's money betting on "futures." Most of the embezzlements of employes handling money have grown out of these hazardous, but seductive risks, in which money is sometimes made easy, but more often lost in the same way. It is the most desperate kind of gambling. It encourages fraud and idleness, and is attended by a most unhealthy excitement. It has multiplied defalcations, suicides and insanities. It has destroyed the fortunes and happiness of men of small estates, in order to swell the fabulous riches of magnates. Stock and grain or produce gambling is among the besetting evils of our time and country. Germany has set the example; may the Union follow the precedent.—Press, Columbus, O.

PERSONAL

A. Hannagan is buying grain at Hedrich & Wood's office at Penfield, Ill.

John Dunn of Taylor, Wis., is now buying grain for the Jones Lumber & Mercantile Co., having succeeded David Thompson.

Henry T. Swartz has been appointed agent for the Great Northern Elevator Co. at Superior, Wis. He succeeds E. C. Chandler, who resigned on account of poor health.

James Hancock of Philadelphia, Pa., member of the firm of Hancock & Co., grain merchants, was married November 17 to Miss Matilda B. McKennan of Pittsburg, Pa.

F. R. Warrick, formerly of the Chalfant, Burroughs & Warrick Grain Co. of Kansas City, Mo., has retired from that company. Mr. Chalfant and Mr. Burroughs will continue the business.

W. W. Culver of Great Bend, Kan., who has been in the grain business for many years, is a candidate for the office of state grain inspector. Mr. Culver has many supporters, and has had varied experience in the grain trade.

Chas. M. Lynch is candidate for the office of State Grain Inspector of Kansas, and is making an active canvass. He has the endorsement of the Argentine Board of Trade, in which he is a director, and many influential people in the eastern part of the state.

John Walker, the weighmaster of the Chicago Board of Trade, has resigned his position, the resignation to take effect January 1. The cause assigned is ill health. Several candidates for the office have been presented, but probably no action will be taken until the new directory is organized early in the year.

The Grain Inspection Committee of the Cincinnati Chamber of Commerce was recently called upon to decide who was liable for a car of corn which was heated in transit. A car of new ear corn was sold by J. W. Fisher & Co. to Early & Daniel, commission merchants of Cincinnati. It was some time in transportation, became heated and the consignee held Early & Daniel liable. The committee failed to arrive at a decision, and the two firms compromised the case.

Late Patents

Issued on November 17, 1896.

Apparatus for Weighing and Conveying Grain.—Geo. W. Kramer, Racine, Wis. No. 571,571. Serial No. 532,865. Filed Dec. 24, 1894.

Gas Engine.—Chas. A. Kunzel Jr., Hoboken, N. J. No. 571,447. Serial No. 571,686. Filed Dec. 10, 1895.

Gas Engine Governor.—John W. Lambert, Anderson, Ind., assignor to the Buckeye Mfg. Co., same place. No. 571,448. Serial No. 581,960. Filed March 5, 1896.

Gas Engine.—Fred C. Olin, Buffalo, N. Y. No. 571,495. Serial No. 564,410. Filed Oct. 2, 1895.

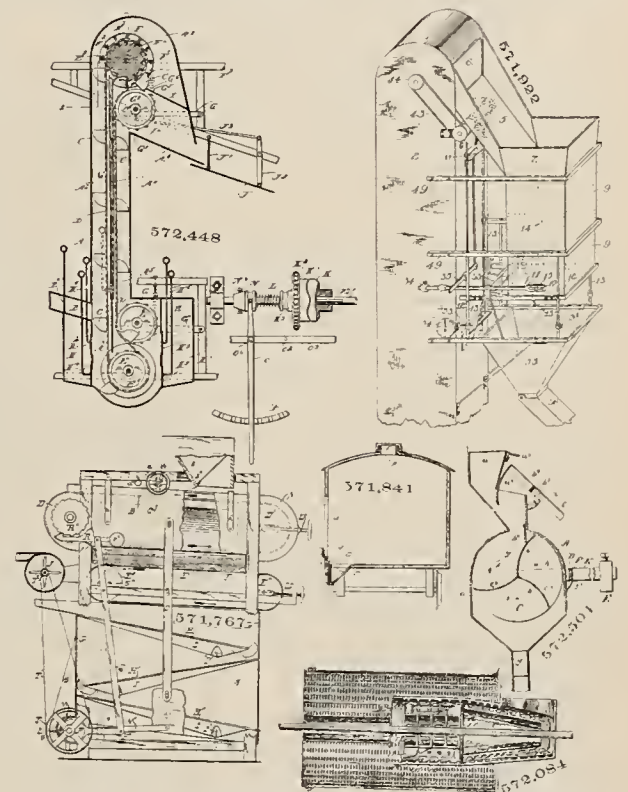
Gas Engine.—Emil Rappe, Chicago, Ill., assignor to Harvey J. Hopkins, Pleasantville, Pa. No. 571,498. Serial No. 498,355. Filed Jan. 29, 1894.

Gas Engine.—Geo. W. Lewis, Chicago, Ill. No. 571,534. Serial No. 482,343. Filed Aug. 4, 1893.

Conveyor Belt Apparatus.—Thomas Robins Jr., New York, N. Y. No. 571,604. Serial 606,311. Filed Sept. 19, 1896.

Issued on November 24, 1896.

Flaxseed Cleaning Mill.—Olaus Johansen, Racine, Wis. No. 571,767. Serial No. 571,860. Filed Dec. 12, 1895. See illustration.



Grain Car.—Frank H. Osterhaus, New York, N. Y. No. 571,841. Serial No. 589,505. Filed April 29, 1896. See illustration.

Automatic Grain Measuring Apparatus.—Alva Hunt, St. Paul, Minn. No. 571,922. Serial No. 504,422. Filed March 20, 1894. See illustration.

Weighing Machine.—Francis H. Richards, Hartford, Conn. No. 572,065. Serial No. 586,928. Filed April 10, 1896. Also, No. 572,066, filed July 8, 1896; No. 572,067, filed July 9, 1896; No. 572,068, filed July 10, 1896; No. 572,069, filed July 24, 1896; No. 572,071, filed Aug. 14, 1896; No. 572,088, filed May 7, 1896; No. 572,089, filed July 2, 1896.

Combined Corn Sheller and Cleaner.—John B. Cornwall, Moline, Ill. No. 572,084. Serial No. 601,038. Filed July 30, 1896. See illustration.

Issued on December 1, 1896.

Explosive Engine.—Edward E. Lindl, New York, N. Y. No. 572,209. Serial No. 572,063. Filed Dec. 13, 1895.

Grain Elevator.—James D. Ream and Moses Lewis, Broken Bow, Neb. No. 572,448. Serial No. 519,469. Filed Aug. 4, 1894. See illustration.

Automatic Weighing and Filling Apparatus.—Henry P. Dennis, Peoria, Ill., assignor of two-thirds to John H. Ellis and Albertus D. Potter, same place. No. 572,504. Serial No. 496,557. Filed Jan. 11, 1894. See illustration.

Issued on December 8, 1896.

Wagon Dump.—John B. Courmyer, Fruitport, Mich. No. 572,630. Serial No. 581,032. Filed Feb. 27, 1896.

Grain Storage Elevator.—Marquis F. Seeley and Jennie Y. Seeley, Chicago, Ill. No. 572,725. Serial No. 519,764. Filed Aug. 8, 1894. See illustrated description published elsewhere in this issue.

A great deal of the corn harvested this year is very soft, and in some sections it has so much moisture in it that there will be difficulty in keeping it. In this case very narrow, well ventilated cribs should be used.

Items from Abroad

The total yield of wheat in Russia, according to official returns, was, in 1896, 35,712,000 quarters (of 480 pounds each); in 1895, 38,448,000 quarters.

The strike of the dockers at Hamburg, Germany, has extended to the employes of the grain warehouses and is interfering with the handling of grain.

The Portuguese government has authorized the importations of about 635,000 quarters (of 480 bushels each) of foreign wheat to supplement a deficiency in the national supply.

Farmers in the provinces of Matanzas, Pinar del Rio and Havana, Cuba, have been officially ordered to transport the new crop of corn to garrisoned towns, where it will be sold to the Spaniards.

A great deal of corn has lately been going from Kansas, Iowa and Nebraska to Mexico. The corn is purchased for 10 to 15 cents per bushel and sold in Mexico as high as \$2 per bushel, Mexican money.

Exports of rye from Black Sea and Danubian ports, from August 1 to November 20, amounted to 1,359,000 quarters (of 480 pounds each), against 1,741,000 quarters in the same time of the previous season.

According to official reports the crops of Belgium this year were good, taken as a whole. The average yields in bushels per acre, compared with 1895, were: Wheat, 29.2, against 28; rye, 29.8, against 29.1; barley, 40.1, against 41.4; oats, 37.9, against 47.4.

Sweden imported during October 70,000 quarters wheat (of 480 pounds each) and 10,000 sacks flour. The net import of the two articles in the three months ending October was 160,000 quarters, against 151,000 quarters in the corresponding three months last season.

Otto Heymann, one of the leading grain merchants of Berlin, Germany, failed recently, with liabilities of about \$700,000. His failure is said to be due to the fact that he had contracted to deliver large quantities of wheat for a considerable time ahead when prices were much lower.

France imported for interior consumption during October 86,000 quarters of wheat and flour (480 pounds to the quarter). The net import of these breadstuffs for the three months ending October totaled 200,000 quarters, compared with 482,000 quarters in corresponding three months last season.

During October Holland imported 883,000 quarters wheat (of 480 pounds each) and 57,000 sacks flour; exports were 785,000 quarters wheat and 12,000 sacks flour. The net import of the two articles in the three months ending October was 498,000 quarters, against 560,000 quarters in the corresponding three months last season.

According to official reports, the crop yields of Russia this year, compared with last year, in quarters of 8 bushels, were: Oats, 68,688,000, against 73,512,000; barley, 22,464,000, against 23,400,000; corn, 2,088,000, against 3,024,000; buckwheat, 5,112,000, against 5,205,600; peas, 720,000, against 2,246,400; millet, 8,568,000, against 5,256,000.

The winter rice crop of Bengal, India, as officially reported, was estimated to be 25 per cent. below an average, should there be no rain up to October 15. The acreage is considerably below the normal, but not much less than last year, being 29,597,000 acres, against 30,402,000 acres in 1895, against a normal area of 32,634,000 acres.

The Royal Statistical Bureau of Prussia returns the yield of the oats crop of the Kingdom at 33.9 bushels per acre, compared with 36.5 bushels, the preliminary estimate of the 1895 crop; peas yielded 14 bushels, against 15.7; potatoes 88 hundredweights per acre (of which 9.9 per cent. diseased), against 162 hundredweight per acre (of which 2.8 per cent. diseased).

Germany imported during October for consumption 832,000 quarters (of 480 pounds each) of wheat and 45,000 sacks flour; the exports included 58,000 quarters wheat and 19,000 sacks flour. The net import of the two articles in the three months ending October was 1,816,000 quarters, compared with 1,540,000 quarters in the corresponding three months last season.

The viceroy of India reports that for the week ending December 5 the rainfall was good everywhere in South Madras. Two inches of rain fell at Cuddapah, one inch at Neemuch, half an inch at Hydrabad and in the extreme north of Punjab. There were light showers in parts of the northwest, Bombay, Deccan and the central provinces of Raghputane and the Punjab.

Australia may now be reckoned on as an importer during the remainder of the season, says the Corn Trade News, for the united outturn of the crops of Victoria and South Australia is now placed at 12,000,000 bushels, or practically the same figure as last season; as these colonies consume 9,000,000 bushels between them, and as New South Wales and Queensland require 3,000,000 bushels in addition to

what they have grown, it is evident that our colonies in the Southern Hemisphere, with which we include South Africa, will be steady buyers for another 12 months.

A British subject writes from Cuddapah, India, urging the importation of American corn, "which," he says, "is half the price of wheat, and would find a ready sale in our up-country villages. It is grown in many parts of the ceded districts, and, from its resemblance to cholam, would be preferred to either rice or ragi, while it could be sold much cheaper than any of the Indian grains. If the government will not undertake such a work, surely there are merchants in Madras prepared to benefit the public with a prospect of a fair profit. Corn would also find a ready sale in Upper India." The first shipment of corn from New York to India was made last month.

Speaking of the crop prospects in India, the Corn Trade News of November 24 says it will be simply guess work to try to estimate her exportable surplus next season; a third serious failure of crops next spring was not anticipated by very many. The early districts were expected to suffer, but a general failure over widespread areas was, of course, extremely unlikely. Had it occurred, there is no saying where the effect would have ended. Now that the rain has come there will be an opportunity to sow in many districts, and should the rainfall extend to the Punjab there is every possibility of there being a wheat crop to harvest next March-May. The sown area will, of course, be less than in an average season, and therefore the crop will probably be a small one, as the yield per acre in India amounts to only about 9 bushels per acre, and a curtailment in area is rarely ever made up by an excess in the average yield. Whatever may be the final result the portion of the crop that matures first is likely to be deficient, hence the exports to Europe, if any, will commence late, and therefore during the remainder of the present European cereal year it is unlikely any material volume of Indian wheat will arrive.

Bulletin No. 8 of the World's Markets for American Products, dealing with Sweden, says that for the five years' period of 1890-94, wheat, wheat flour, rye and seeds were among the ten most important agricultural products imported, the most important gains in imports in that period being in wheat and wheat flour. Import duties are on rice and rice flour, 1.752 cents per 100 kilograms; other grits, .054 cent per kilogram (one kilogram equals 2.20462 pounds); rice in the husk or paddy, .335 of a cent per 100 kilograms; hay, full; rye, wheat, barley, corn, peas and beans, .335 of a cent per 100 kilograms; oats and vetches, free; malt (even crushed), .402 of a cent per 100 kilograms; other grits not specially mentioned, .33 of a cent per 100 kilograms. The annual average imports into Sweden for the five years, 1890-94, were, in bushels: Wheat, 3,860,036, valued at \$3,546,193; rye, 3,911,047, valued at \$2,873,726. Values of exports were: Oats, \$3,372,516 in 1894; \$5,675,201 in 1893; barley, \$86,342 in 1894; \$136,733 in 1893; other cereals, \$145,754 in 1894; \$5,995,706 in 1893. Owing to a growing demand for improved breadstuffs and use of grain for feeding cattle, Sweden has imported cereals of late years, chiefly rye and wheat.

OBITUARY

Edwin Barber, a well-known grain man of Minneapolis, Minn., died November 20.

Alonzo W. Ward, who was formerly identified with the grain business at Sherburne, Mass., died December 5 at the age of 75.

Henry S. Updyke, a member of the Chicago Board of Trade, and for many years in the employ of Geo. A. Seaverns, grain merchant, died December 1, at the age of 27 years.

Philip Singleton, of the firm of P. Singleton & Bro., dealers in grain, hay, feed and flour at Baltimore, Md., died recently. Mr. Singleton was highly esteemed by his business and social associates, and was an honored member of the Chamber of Commerce.

S. S. Sprague, of the firm of S. S. Sprague & Co., grain dealers of Providence, R. I., died November 11. Mr. Sprague was born in South Killingly, Conn., July 3, 1819. He was an old-time grain man and one of the most prominent business men of Providence. He had served in the common council and board of aldermen, was commissioner of the state sinking fund, and president of several banks.

Pardon W. Aldrich, one of the oldest grain men of Worcester, Mass., died suddenly November 16 at Grafton, where he was visiting. Mr. Aldrich was born in Grafton, and was 70 years of age. He remained in his native town until 21 years of age, and then went to Worcester, and at once opened up a wholesale grain and flour business, which he continued for over 30 years. He retired from the grain business in 1880.

Fires - Casualties

The report that John Fox's elevator at Lucan, Ont., was destroyed by fire was erroneous.

J. B. Drew, a grain buyer of Minneapolis, Minn., accidentally shot himself December 8, and died soon after.

Henry Blackburn's hay and grain storage building at Live Oak, Fla., was burned November 15. Loss \$2,000; no insurance.

Jacob Lafollette's large barn near Shanonville, Ind., burned recently together with 70 tons of hay and 3,000 bushels of corn.

Archibald Campbell, a well-known grain dealer at Lakeport, Ont., fell off the wharf at Colborne November 11 and was drowned.

The Westfall Elevator at Viborg, S. D., was destroyed by fire recently, together with 6,000 bushels of wheat. The loss was partially covered by insurance.

W. K. Greeley's elevator and mill at Sabina, Ohio, were destroyed by fire November 16, together with considerable grain and flour. Loss \$12,000; no insurance was carried.

Daniel & Morris' elevator at Vandalia, Mo., was destroyed by fire November 30. The loss was \$3,000; insurance \$1,000. The fire is said to have been caused by an incendiary.

One of the storehouses of the Valley Grain Co. of Brattleboro, Vt., was destroyed by fire November 18, together with considerable grain, etc. Loss \$3,000; insured. The fire was of incendiary origin.

J. E. Stevenson & Co., dealers in grain, hay, feed, etc., at Trenton, N. J., sustained a loss of \$3,000 by fire November 27. The fire started in baled hay, and materially damaged the stock, the loss on which was partially covered by insurance. Incendiarism is suspected.

The elevator at Chatham, Ill., belonging to E. R. Ulrich & Son of Springfield, Ill., was destroyed by fire December 2. Mr. E. R. Ulrich Jr. informs us that it cost over \$13,000 to build the elevator, and that the house contained 5,400 bushels of grain. The elevator was insured.

The elevator and mill supply house at Edgefield, Ohio, belonging to John Jenks, grain dealer of Jamestown, were destroyed by fire at 4 a. m. December 6, together with considerable machinery and grain. The loss was heavy and was partially covered by an insurance of \$1,000.

E. F. Parkhurst, grain buyer for the Interstate Elevator Company, committed suicide by shooting himself through the brain recently at Kenyon, Minn. Mr. Parkhurst was about 40 years of age, married, and had a wife and two children. Despondency caused by dissipation was the cause of the deed.

Empey & Woodard's \$5,000-bushel elevator at Farmington, Minn., was totally destroyed by fire at 4 a. m., November 26, together with 60,000 bushels of grain. Loss \$14,000; insurance on building \$2,500, on grain \$4,000. Some of the grain may be saved. The fire is supposed to have been the work of incendiaries. Empey & Woodard contemplate rebuilding at once on the old site and putting up an iron covered building.

Elevator "A" of the St. Paul Warehouse & Elevator Co., St. Paul, Minn., was destroyed by fire on the evening of November 27. The fire is supposed to have been caused by friction, spreading to the oil under the drive wheel. The house was of frame, covered with sheet iron, and had a capacity of 500,000 bushels. It was built in 1874 at a cost of \$100,000. The elevator had been idle all summer, and in the fall a contract was made by the owners with J. Q. Adams for the storage space until the shipping season next spring. Mr. Adams had already loaded 100,000 bushels of oats into the bins, and in a short time would have had the elevator filled. The insurance on the building amounted to \$28,500, on the grain \$19,500.

It is the experience of a good many grain men that rats are unusually plentiful this year, and many plans have been tried to keep them away from open cribs. Building the crib a foot from the ground may keep out rats, but not other vermin. On a farm near Bloomington, Ill., a crib on being emptied of grain was found to be the home of 202 rats. Five dogs were turned loose upon them and 198 were killed, only four escaping.

A grain dealer of Bloomington, Ill., recently shipped to New Orleans a car of corn of 1,400 bushels. The car was one of the Illinois Central's biggest which have been built for the grain carrying trade. A few years ago the ordinary car was loaded with from 500 to 600 bushels, and even now in selling and buying among dealers 600 bushels is considered a carload. Lately, however, 1,000 or 1,200 bushels in a car have been a frequent occurrence.

Court Decisions

Shipper of Cattle Free to Contract.

A railroad company cannot limit its common law liability by a special contract in writing with the shipper of cattle, unless it is freely and fairly made; and the company cannot exact, as a condition precedent for carrying the cattle, that the shipper must sign a contract in writing limiting or changing a common law liability. If the company has two rates or charges for carrying stock, one if carried under the old common law liability, and the other if carried under a special contract, the shipper must have real freedom of choice in making his election, or the contract is not binding on the cattle shipper. —Atchison, T. & S. F. R. Co. vs. Masou (Ct. App. Kan.), 46 Pacific Reporter, 31.

Chattel Mortgage on Growing Grain—Filing—Conversion.

The Supreme Court of Minnesota held, in the recent case of Hogan et al. vs. Atlantic Elevator Company, that the filing of a chattel mortgage on a growing crop of grain continues to be constructive notice to all the world, although the grain is thrashed and removed from the land on which it was raised; that the fact that the defendant bought the grain for an adequate consideration in the usual course of business was prima facie evidence that it was a purchaser in good faith in the absence of any opposing suspicious circumstances, and that the burden was on the plaintiff who claimed under a chattel mortgage to show that it was executed in good faith, and that refusal to restore goods on demand is only evidence of a conversion, and wherever a conversion can be otherwise proved it is not necessary for a plaintiff to prove a demand and refusal.

Railroad—Cattle—Loss—Liability.

The Kentucky Court of Appeals held, in the recent case of The Louisville & Nashville Railroad Company vs. Robinson, that where two carloads of cattle shipped a distance of 144 miles should at least have reached their destination at a very early hour in the morning of the next day after they were shipped, but did not, in fact, reach there until 9 or 10 o'clock next morning, and too late for that day's market, for which they were intended, some of the hogs having died from suffocation on account of the delay, which was not satisfactorily accounted for, the railroad company was liable for that loss, and also for the keep of the stock until it could be offered in the first regular market succeeding its arrival, and that this was true, though no written notice of the loss of the hogs was given the company as required by the contract, there being proof that such notice was waived by the general freight agent of the company.

Railroad—Elevator—Right of Way.

The Supreme Court of the United States had before it recently the appeal of the Missouri Pacific Railway Company from the decree of the Supreme Court of Nebraska directing the railroad company, at the request of the State Board of Transportation, to permit a party of farmers to erect a grain elevator on its right of way, and itself to construct a switch through it. The court reversed the decision of the state court, saying that it was not a question affecting rates of transportation, not an order compelling the railroad company to erect an elevator, nor a matter affecting equal rights to cross the property from the outside, but a demand that, simply for the convenience of the petitioners, they be permitted to build the elevator on the property of the railroad company, and this, the court were unanimously of opinion, was the taking of private property for private use without the due process of law, and therefore in violation of the plain terms of the constitution.

Insurance—Loss—Evidence.

The Supreme Court of Texas held, in the recent case of Royal Insurance Company vs. McIntyre, that there can be no total loss of a building so long as a remnant of the structure standing is reasonably adapted for use as a basis upon which to restore the building to the condition in which it was before the injury, and that whether it is so adapted depends upon the question whether a reasonably prudent owner uninsured, desiring such a structure as the one in question before the injury, would, in proceeding to restore the building to its original condition, utilize such remnant as such basis. The suit was brought to recover upon a policy of insurance on a building which the appellee alleged had been totally destroyed. The appellant offered evidence to prove that about 90 per cent. of the material still in the house was uninjured, and that the remainder of said building could be used for reconstruction; that only about 20 per cent. of the building had been destroyed; that the building could be renewed and rebuilt without tearing it down, and that by replacing the dam-

aged portions the building would have been as good as new. This evidence was excluded, and the appellee recovered the full amount of the policy. The Supreme Court reversed the decision of the trial court, holding that the evidence offered was competent.

Authority of Officers to Issue Warehouse Receipts.

The case of Corn Exchange Bank vs. American Dock & Trust Co. (43 Northeastern Reporter, 915), recently decided by the Court of Appeals in New York, is of importance to the grain trade. The action was based upon warehouse certificates issued by the president of the Dock & Trust Co. to his own order, for cotton purporting to have been deposited by him in the storehouses of his company, and upon which the bank had lent him money. The court said: The right to recover from the Dock & Trust Company is based on the contract embraced in the certificates. If that contract is valid as to third persons who parted with value on the strength of it, the company is liable. Its validity depends upon the authority of its president to make such an agreement as to cotton actually deposited by him, representing, as he did, both contracting parties. That authority, if it existed as to the company, came from its board of directors, either expressly or impliedly, and, as express power was not conferred, the question was as to whether implied power had been conferred. That depended on the directors' knowledge of his assumption of authority in similar cases, and their acquiescence in its exercise. If it had been found as a fact that the power existed, the actual presence of the cotton would have been immaterial, as the company would thereby be prevented from denying it. The presence of the cotton as an independent fact would confer no right on the banking company unless it proved title thereto; and it had no title provided the certificates were invalid; while if they were valid the company was liable whether there was any cotton on hand or not. The fact to be determined, therefore, is, whether authority had been conferred, directly or by implication, and not as to whether there was cotton on deposit in the warehouse.

THE MARKETS

[We will be pleased to publish under this head short reviews of the conditions ruling in the different markets. Copy must reach us by the morning of the 14th of each month.]

Grain report of Shanks, Phillip & Co., Memphis, Tenn., December 12. CORN—Is easy and the demand very light. No. 2 White Corn sells at 25 cents. No. 3 White at 24; No. 2 Mixed Corn at 24 cents. OATS—Prices are ruling lower, but the demand is good. No. 2 White Oats sell at 23 cents. No. 3 White at 20; No. 2 Mixed Oats at 20 cents. HAY—The demand for hay is better, with improved prices. Fancy Timothy Hay sells at \$12.50. Choice Timothy at \$12.00. No. 1 Timothy at \$11.00. No. 2 Timothy at \$9.00; Choice Clover Mixed at \$10.00. No. 1 Clover Mixed at \$8.50; Choice Kansas Prairie Hay at \$7.25. No. 1 Kansas Prairie at \$6.75; Choice Arkansas Prairie at \$6.00.

Grain report of Collins & Co., Cincinnati, Ohio, December 11.—Unexceptionally fine weather prevails for this season of the year. The markets the past week have turned dull, and the lull in business that usually surrounds the holiday season has started in earlier than usual this year. The trade generally do not anticipate very much activity during the balance of this month, as the markets during December are generally unsettled and easy, attributable to the annual settlements, stock-taking time and closing of accounts causing buyers' wants to be limited to actual requirements. The outlook for future business, however, continues promising, and nearly all lines look forward to considerable activity with the beginning of the New Year, and, while values may be slow in advancing, the tendency will be in that direction, which will be very helpful toward bringing about more satisfactory business conditions. WHEAT—The market is unsettled. The arrivals are small and the demand not very urgent. Good milling wheat is scarce. No. 2 Red at 90¢@92 cents. Choice long berry at 93 cents. No. 3 Red at 85¢@86 cents. No. 4 at 78¢@83. Sample lots at 65¢@75 cents, as to quality and condition. CORN—There is a fair demand at the prevailing prices, but the arrivals are small, as the low values do not offer very much inducement for shipping, although buyers are indifferent as to future wants, owing to the large supplies in sight, which they figure must sooner or later begin to come on the market. No. 2 White at 23¢@23½ cents. No. 3 White at 22 cents. No. 2 Yellow at 22½ cents. No. 2 Mixed at 22¢@22½ cents. No. 3 Mixed and Yellow at 21¢@21½ cents, and the offerings were well cleaned up. EAR CORN—Demand is nominal. Choice Yellow Ear at 21¢@22 cents. Mixed and White at 20¢@21 cents, and receipts are about equal to the inquiry. OATS—Are in fair request and prices rule about steady under small receipts. The low grades are more particularly inquired for. No. 2 White at 23½¢@24 cents. No. 3 White at 20¢@21 cents. Rejected White at 18¢@19 cents. No. 2 Mixed at 19¢@20 cents. No. 3 Mixed at 17½¢@19 cents. Rejected Mixed at 16¢@17 cents, with the market closing firm. RYE—The receipts are larger; there is scarcely any inquiry, and sales are rather difficult to effect. Choice Milling at 40¢@42 cents. Ordinary No. 2 at 38¢@39 cents. No. 3 at 34¢@36 cents. Rejected at 29¢@31 cents. Hay—Receipts for the week, 1,983 tons; shipments, 419 tons. For the corresponding week last year the receipts were 1,341 tons, shipments 312 tons. Favorable weather conditions continue to exist for the baling and shipping of hay, which is evidenced by the increasing receipts. Grades below choice and No. 1 Timothy are difficult to dispose of,

while the prices on the top grades are easier and slightly lower. We advise against shipping either clover or clover mixtures of the lower grades, also of No. 2 and lower grades of timothy just now, for they will sell to better advantage as soon as there is snow on the ground and cattle are housed. Choice Timothy at \$10.75@11.00. No. 1 at \$10.00@10.50. No. 2 at \$8.00@8.50. No. 3 at \$5.50@6.00. No. 1 Clover at \$9.50@10.00. No. 2 at \$7.50@8.50. No. 1 Clover Mixed at \$9.00@9.50. No. 2 at \$7.00@8.00. Prairie is dull, with choice upland at \$8.00. No. 1 at \$6.00@7.50. STRAW—Dull and lower under larger offerings, rye at \$7.00@7.50. Wheat at \$5.50@6.00. Oats at \$5.00@5.50. MILLFEED—The offerings are few, but the demand is only moderate. Bran at \$7.00@7.50. Middlings at \$8.00@8.50. Choice White at \$9.00.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

MILL AND ELEVATOR AT A BARGAIN.

A 50-barrel roller steam mill with grain elevator attached will be sold at a bargain on easy terms. Address

JOHN C. THOMAS, Urbana, Ill.

ELEVATORS FOR SALE OR TRADE.

I have three elevators in Illinois which I will sell for cash or trade for good land in Iowa or Illinois. Address

Y. C., M., care "American Elevator and Grain Trade," Chicago, Ill.

25,000-BUSHEL ELEVATOR AT A BARGAIN.

The best 25,000-bushel grain elevator in Central Illinois, for sale at a bargain. Almost new, all modern improvements, with feed mill in connection. Located at an excellent grain point. Owner wishes to retire on account of health. Address

V. & S., M., care "American Elevator and Grain Trade," Chicago, Ill.

INDIANA ELEVATOR FOR SALE.

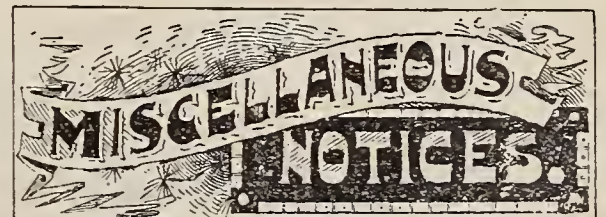
Located at good grain point; competing railroads; no near-by competition; immense corn crop; 25-horse steam engine; large sheller and corn cleaner; wheat and small grain cleaner; hopper scale and all modern conveniences. Only built a year. For sale at a bargain for spot cash. Address

C. L. AMES, Francesville, Ind.

ILLINOIS ELEVATOR AT A BARGAIN.

A 30,000-bushel elevator and implement building in good corn and oats section in Central Illinois, on the Illinois Central Railroad, for sale. Power furnished by gasoline engine. This elevator is in fine condition, and the purchaser will find it a bargain. Terms reasonable. For full particulars address

A. D., M., care "American Elevator and Grain Trade," Chicago, Ill.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

POSITION AS SUPERINTENDENT WANTED.

Position wanted as superintendent or foreman of grain elevator, either large or small house. Have had ample experience and can furnish good references. Address

SUPERINTENDENT OR FOREMAN, M., care "American Elevator and Grain Trade," Chicago, Ill.

LIVE GRAIN MAN WITH CASH WANTED.

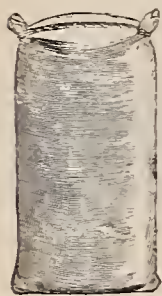
Wanted, a live man, with money, to buy grain in a thriving Iowa town on the C. & N. W. R. R. No competition within 9 miles. Widow woman will rent or sell warehouse, etc. Prosperous community. Splendid farming country. Address

BIG GRAIN POINT, M., care "American Elevator and Grain Trade," Chicago, Ill.

IMPROVED GRAIN AND SEED TESTERS.

For 30 days we will sell the Improved Grain and Seed Tester, warranted to be true to the United States Standard Winchester Bushel, every Tester guaranteed and money refunded if not satisfactory. One pint, \$5.50; one quart, \$6.50; two quart, \$7, f. o. b., Akron, Ohio. Address

A. S. GARMAN & SONS, Akron, Ohio.

**GRAIN BAGS—BURLAPS.**

All kinds of Bags,
New and Second Hand.

ORDERS FILLED PROMPTLY.

W. J. JOHNSTON,

Factory and Office,
182 Jackson Street, CHICAGO.

ROOFING AND SIDING.

Write us for Catalogue and low
Prices on best

STEEL ROOFING, CORRUGATED IRON, Etc.

We are large Manufacturers of these goods and can save you money.

SYKES STEEL ROOFING CO.,
611 So. Morgan St., Chicago, Ill.,
and Niles, Ohio.

JAMES A. MILLER & BRO.

129 and 131 South Clinton Street, CHICAGO.

Corrugated Iron Roofing and Siding

Material Only or put on Complete.

Special pains are taken to get out these materials so they can be cheaply put on and make a good job.

**DURABLE—EASILY APPLIED.**

This roofing is manufactured from natural Trinidad asphalt materials, and will not dry up and become brittle under exposure to the weather as coal tar roofings do. Send for free sample of roof 12 years old, with circular and price list to

WARREN CHEMICAL & MFG. CO.,
56 Fulton St., New York, U. S. A.

SEND ORDERS FOR

HARD
SOFT
BLOCK
BLACK-
SMITH

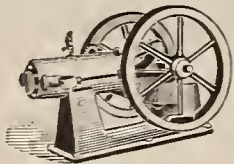
COAL
COKE

Best Grades
Best Prices
Best Deliveries

To MILES & COMPANY,

MINE AGENTS AND SHIPPERS.

PEORIA, ILL.

**GASOLINE ENGINES**

Are the best and cheapest power for Elevators, Conveyors, Feed Mills, Corn Shellers, Etc.

Catalogue Free.

The Van Duzen Gasoline Engine Co.,
CINCINNATI, OHIO.

To POULTRY RAISERS.

The Complete Poultry Manual is a neat little work which is well worth reading by those interested in poultry, or by boys or girls who want to turn an honest penny. The price is only 25 cents. Sent postpaid on receipt of price. Address

MITCHELL BROS. CO.,

184 Dearborn Street, Chicago, Ill.

E. R. Ulrich & Son,
SHIPPERS OF
WESTERN GRAIN,
ESPECIALLY

High Grade White and Yellow Corn.

Elevators through Central Illinois on Wabash Ry., Chicago & Alton Ry., C. P. & St. L. Ry., and St. L., C. & St. P. Ry.

Main Office, 6th Floor, Illinois National Bank Building,
SPRINGFIELD, ILLINOIS.

Write for Prices Delivered.

COMMISSION CARDS.

[We will not knowingly publish the advertisement of a bucket-shop keeper or irresponsible dealer.]

SHIP YOUR GRAIN

—TO—

P. B. & C. C. MILES,

COMMISSION MERCHANTS,
PEORIA, ILL.

Established 1875.

LIBERAL ADVANCES
QUICK RETURNS.

REFERENCES:—Commercial Nat. Bank, Peoria Savings, Loan & Trust Co., Peoria.

ACCOUNTS OF GRAIN DEALERS

OR ORDERS FOR

Speculative Investments

On the CHICAGO BOARD OF TRADE SOLICITED.

Call at our office or write for private Cipher Code or Shippers Grain Record.

McLAIN BROS. & CO.,

RIALTO BUILDING, CHICAGO.

LEMAN BARTLETT.

O. Z. BARTLETT.

L. Bartlett & Son,

GRAIN AND PRODUCE
COMMISSION MERCHANTS.

BARLEY A SPECIALTY.

Room 23 Chamber of Commerce Bldg.
Milwaukee, Wis.

Careful attention given to orders from Brewers, Maltsters and Millers

E. P. MUELLER,

Shipper of Wet Feed,

From Chicago, Milwaukee and La Crosse.

Particular attention paid to the shipments
of mixed car lots.

860 Calumet Bldg., 189 La Salle St., CHICAGO.

Will pay the highest prices for Wet and Dried Brewers' Grains, Dried Distillers' Slops, Starch Feed, Damaged Wheat, Hominy Feed and Barley Sprouts under yearly contracts. Write for estimates F. O. B. cars your city.

J. F. ZAHM.

F. W. JAEGER.

F. MAYER

ESTABLISHED 1879.

000

J. F. ZAHM & CO.,

Grain and Seeds,

TOLEDO, - - - OHIO.

Send for our "RED LETTER." It'll keep you posted.

E. L. ROGERS & CO.,

ESTABLISHED
1863.

COMMISSION
MERCHANTS

GRAIN, Flour, Seed, Hay and Straw.

358 Bourse Building, PHILADELPHIA, PA.

Liberal advances made on consignments. Market reports furnished gratuitously on application. Correspondence solicited.

References: } Corn Exchange National Bank.
} Manufacturers National Bank.
} Merchants National Bank.

COMMISSION CARDS.

J. J. BLACKMAN ASSOCIATED WITH
L. E. BUNKER

COMMISSION
MERCHANT.

Flour, Grain, Hay, Feed, Beans, Peas, Lentils,
Seeds, Corn Goods, Etc.

274 Washington Street, - - NEW YORK.

Established 1868.

S. W. FLOWER & CO.,

GRAIN AND SEED
MERCHANTS. . . .

TOLEDO, - - OHIO.

High grades of Clover, Alsike and Timothy Seed a Specialty.

If you want to buy, sell or consign, please correspond with us.

Martin D. Stevers & Co.

Commission Merchants,

218 LA SALLE STREET, - CHICAGO.

We make a specialty of selling by sample

Barley, Wheat, Rye, Oats, Corn, Flax and Timothy Seed.

Grain, Seeds and Provisions for future delivery
bought and sold on margins.

PHILIPP BENZ.

EMIL P. BENZ.

PH. BENZ & CO.

ESTABLISHED 1872.

COMMISSION MERCHANTS

GRAIN, SEEDS AND HAY,

WHEAT, CORN, OATS, RYE, BARLEY, FLAX, GRASS SEEDS, HAY.

Rooms 204-205 Omaha Bldg., Chicago.

REFERENCES: Bank of Commerce, Chicago. Mercantile Agencies
LIBERAL ADVANCES MADE ON CONSIGNMENTS.

ESTABLISHED 1879.

LEDERER BROS.,**GRAIN and SEED**

Commission Merchants,

BALTIMORE, - - MD

We give careful attention to every shipment, are always prepared to make cash advances on consignments. We make a specialty of handling spot goods, which we either sell after arrival or hold if requested. We solicit your trade as we do a strictly commission business. REFERENCES: Merchants National Bank, Baltimore, Md., and the Commercial Agencies.

GEO. N. REINHARDT & CO.,

MELROSE STATION, NEW YORK CITY.



We sell on Commission and buy direct.

HAY, GRAIN AND FEED.

Storage capacity 8,000 bales, 30,000 bushels.
Let us know what you have to offer.

COMMISSION CARDS.

B. WARREN.

B. WARREN JR.

WARREN & CO.,
Grain Commission Merchants,
ROOMS 7 AND 9 CHAMBER OF COMMERCE,
Peoria, Ill.

EDWARD P. MERRILL,
Millers' Agent.

Flour, Grain and Mill Feed.

OFFICE:

21-2 Union Wharf, PORTLAND, MAINE.

No consignments wanted.
Letters Promptly Answered.

All sales direct.
I want a good Corn Account.

COMMISSION CARDS.

H. B. SHANKS.

Established 1873.

S. H. PHILLIPS.

Shanks, Phillips & Co.,

COMMISSION MERCHANTS,

HAY, CORN, OATS, BRAN, CHOPS, FLOUR AND CORN MEAL.

306 Front St., Memphis, Tenn.

Refer to Union and Planters' Bank.

Cash advances on B. of L.



F. H. PEAVEY & CO.,

Minneapolis,

GRAIN RECEIVERS.

Consignments Solicited.

Minn.

MILLING WHEAT A SPECIALTY.

COMMISSION CARDS.

M. F. BARINGER,

....SUCCESSOR TO....

J. R. TOMLINSON & CO.,

...GRAIN AND MILL FEED...

416-418 Bourse Bldg., Philadelphia, Pa.

Correspondence with millers and grain dealers solicited. Sight draft with bills of lading attached honored on all shipments.

COLLINS & CO.,

STRICTLY COMMISSION

Grain, Hay and Mill Feed.

CINCINNATI, OHIO.

JEFFREY

Roller, Steel and Special Chains
—FOR—
**ELEVATING
AND CONVEYING
MACHINERY**
FOR HANDLING MATERIAL OF ALL KINDS.
**POWER TRANSMISSION
MACHINERY.**
COAL MINING MACHINERY.
Wire Cable
Conveyors.
For long and
short distance
conveying.

THE JEFFREY MFG. CO. 163 Washington St.
Columbus, Ohio. NEW YORK.
Send for Catalogue.

**DUNEBARGER'S
Hay and Grain Record**

Gives history of each car from date of purchase to final settlement. Profit and Loss quickly seen: arrangement perfect, and a great aid in your business, also checking up accounts. Try it and you will not do without. Every Shipper or Receiver, large or small, wants it. Copyrighted.

Price, \$3.00. Containing 200 Pages.

—ADDRESS—

M. DUNEBARGER, - Fayette, O.

Trucks and Sack Holders.



Improved Trucks

Combination Truck and Step-Ladder, and Single Trucks, Sack Holders and Stand.

Best Boiler Compound recipe, the right to manufacture and use, with instructions. Price.....\$1.00
Combination Truck and Step-Ladder and Single Truck for..\$3.00
Prices for larger number given. Write for prices and circulars. Circulars free.

PEERLESS MFG. CO., Springfield, Ohio.

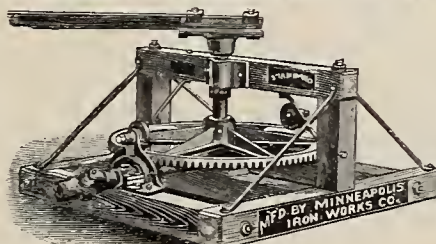
MINNEAPOLIS IRON WORKS,

D. M. GILMORE, Prop.,

MACHINIST and BOILER MAKER.

COMPLETE OUTFITS FOR

Grain Elevators,



Grain Elevator Machinery, Boxes, Hangers and Shafting, Elevator Buckets, Boot Tanks, Sprocket Wheels, the Standard Horse Power (single and double gear), Detachable Chains and Attachments, Wood and Iron Pulleys, etc., etc.

Repairs Receive Prompt Attention.

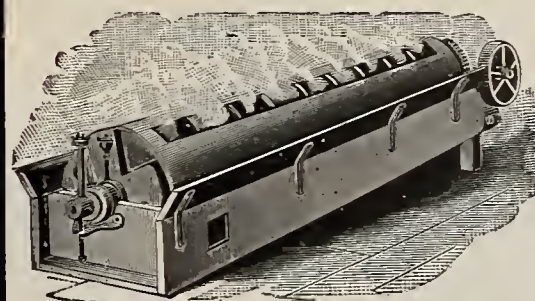
OFFICE 23 SECOND STREET NORTH
SHOPS AT 900 FOURTH STREET SOUTH.

MINNEAPOLIS, MINN.

**DAMP WHEAT can be PUT in CONDITION for
GRINDING or STORAGE**

By using our

**STEAM
DRYER,**



Which is also a successful
Wheat Heater or Temperer
or Dryer for Washed
Wheat or Bran.

It leaves the Wheat in Perfect Condition for the Rolls. Will also dry
Malster's, Brewer's and Distiller's Wet Grain.

Not an Experiment. In successful use 25 years drying
CORN MEAL AND HOMINY,

BREWERS' GRITS AND MEAL.

**BUCKWHEAT, RICE AND
ALL CEREAL PRODUCTS.**

ALSO SAND, COAL DUST, GRAPHITE AND CLAY AND ORE OF ALL KINDS!

Automatic in operation, requiring no attention. Double
the capacity of any other Dryer sold for same price.

THE CUTLER CO., North Wilbraham, Mass.

THE OLD WAY.



For NEW and BEST Way
ADDRESS

UNION IRON WORKS,

DECATUR, ILL.,

Manufacturers of the CELEBRATED

Western Shellers and Cleaners

The "Best in the World."

Elevator Supplies of All Kinds a
Specialty.

We are the Pioneer Elevator Builders of the
West, and claim priority in the building of
Cheap Elevators with Increased Conveniences.
Don't BUILD until you get our Plans and Prices.

Write for Catalogue.



**J. B. DUTTON'S
Patent Automatic Grain Scale.**

FOR USE IN

ELEVATORS, DISTILLERIES, MALT HOUSES, FLOUR MILLS, ETC.

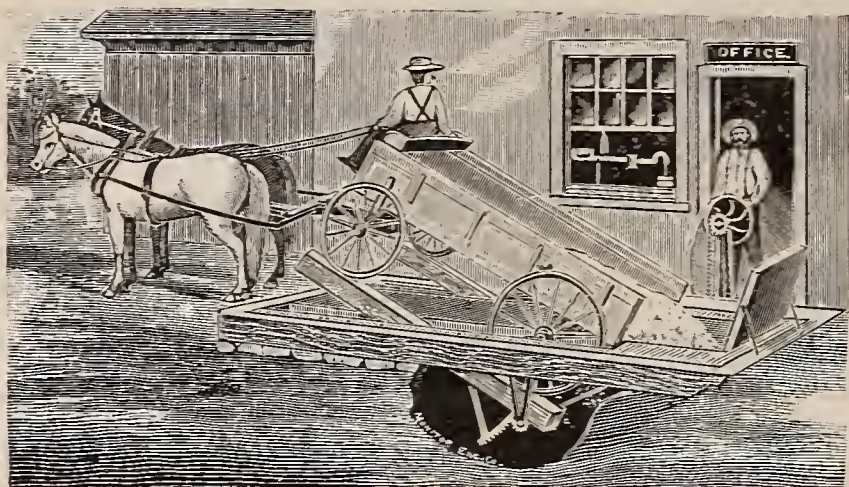
ACCURATE AND RELIABLE AT ALL TIMES. SCALES SENT ON 30 DAYS' TRIAL.

SEND FOR CIRCULAR AND PRICE LIST.

Address

J. B. DUTTON, 1026 and 1028 Scotten Ave., DETROIT, MICH.

Gold Dollars Those Who Have Tried It



At FIFTY CENTS apiece are CHEAP, but they do not represent a better investment than we offer the "elevator and grain trade" in our

Controllable Wagon Dump.

WINCHESTER, ILL., February 4, 1896.
MESSRS. SAVAGE & LOVE CO., Rockford, Ill.

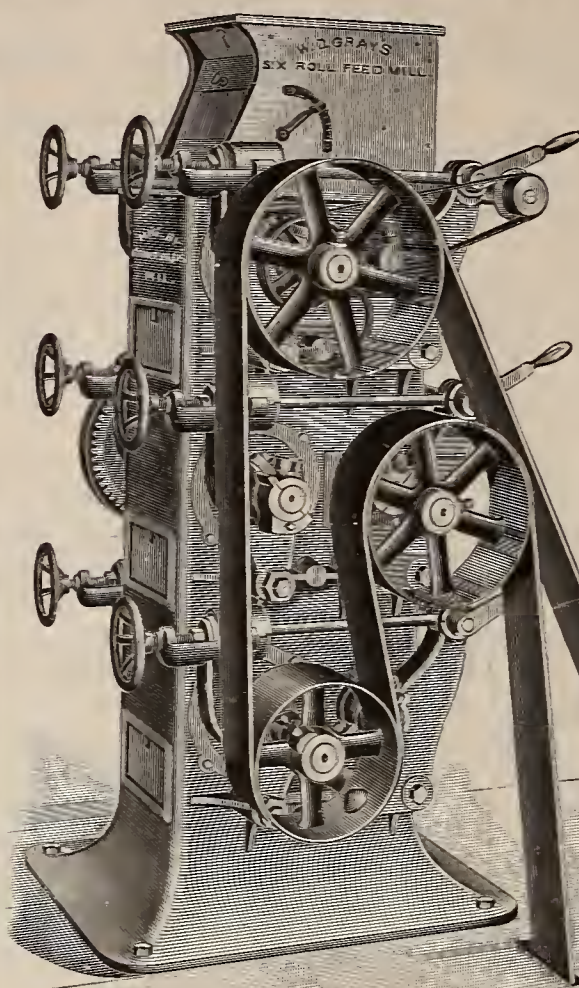
GENTLEMEN:—Your favor of the 28th ult. received and noted. Last July I put one of your Controllable Wagon Dumps in a Fairbanks, Morse & Co.'s 22-ft. scale, and it has given me entire satisfaction in every respect. In this locality the bulk of grain is as yet handled in sacks, and by tipping the Dump about one-half it makes a nice slant, making it very easy to pull the sacks to back end of wagon, where strings are cut and grain runs out into bin below. Every farmer, without exception, speaks in glowing terms of the merits of this Dump. In unloading loose grain from wagon there is no dump that will equal yours in being easily handled and always under control of operator. No scaring horses, no dropping of wagon and no noise. I consider a grain elevator incomplete without the Savage & Love Controllable Wagon Dumps.

Yours truly,
M. C. WOODWORTH.

MANUFACTURED ONLY BY

THE SAVAGE & LOVE CO., Rockford, Ill.

FAIRBANKS, MORSE & CO., St. Paul, Minn., Northwestern Agents.



SAY THAT OUR

Six Roller Feed Mill

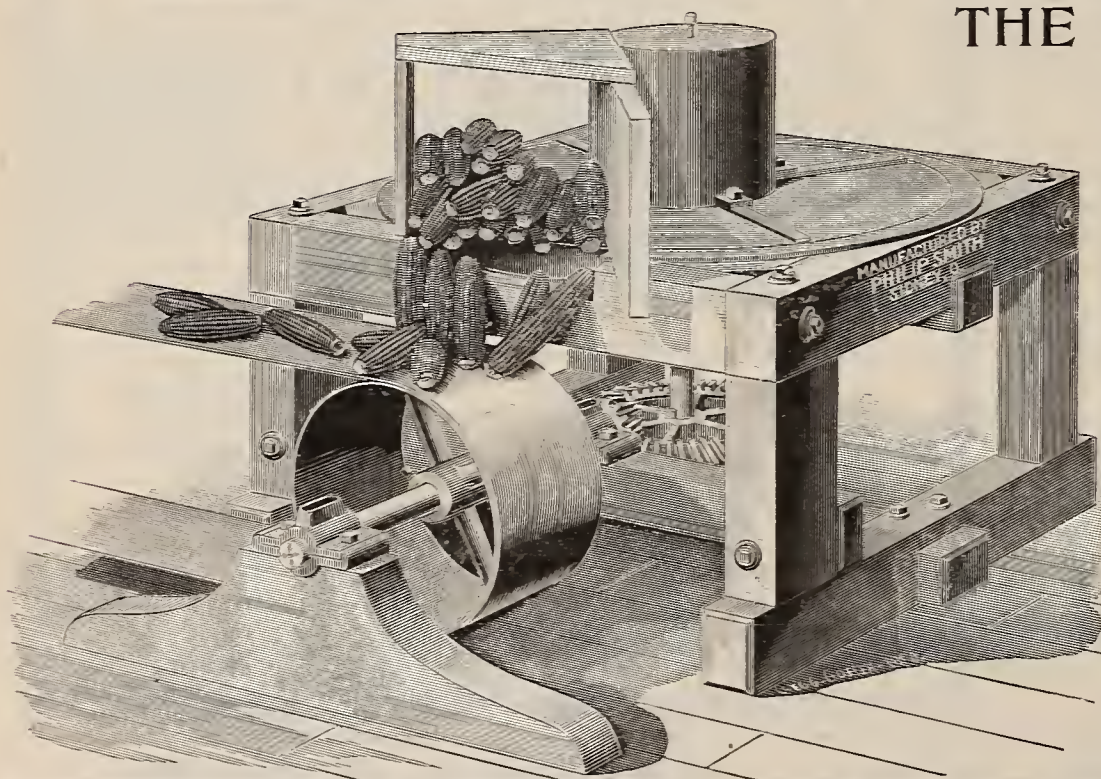
Will do more grinding, better grinding, and with less expense for repairs than any other machine used for that purpose.

Feed grinding is a great help to the average country elevator. If you think of trying it

Get Our Catalogue and Prices.

THE EDWARD P. ALLIS COMPANY,

RELiance WORKS, MILWAUKEE, WIS.



THE MARQUIS PATENT

EAR CORN ELEVATOR AND SHELLER FEEDER.

THIS Feeder will feed corn from the dump to the elevator or sheller either with or without drag belt. Will feed 100 to 1,500 bushels per hour without any attention. Can be regulated to the capacity of the sheller or elevator while in operation. Can be made to feed to either sheller or elevator by changing reverse board. It is made of iron and is very durable. It will last a lifetime. Can be applied to dumps now in use at very little expense. We have over 5,000 of these machines in use that are giving universal satisfaction.

Warehouse and Elevator Machinery of All Kinds.
Discounts furnished on application.

PHILIP SMITH, SIDNEY, OHIO.

PRICE REDUCED 66 PER CENT.

Cawker's American Flour Mill and Elevator Directory.

FORMER PRICE, \$10.00.

PRESENT PRICE, \$3.50.

We have a limited number of Cawker's American Flour Mill and Elevator Directory for 1895-1896 on hand, which we will sell at \$3.50 per copy. They will not last long at this price, so speak quick if you want one. We will furnish a copy of the Directory and a year's subscription to the AMERICAN ELEVATOR AND GRAIN TRADE for \$4.50.

Address **MITCHELL BROS. CO.,** 184 and 186 Dearborn St., CHICAGO, ILL.

Only \$2
For the
Greatest
Work
Of the
kind on
Earth!

Do you Operate an Elevator or Flouring Mill?
Are you a Grain Buyer or Seller?
Are you a Grain Commission Merchant?
Are you a Track Buyer or Seller?

OR, DO YOU DESIRE TO REACH THIS CLASS OF CUSTOMERS?

Only \$2
For the
Greatest
Work
of the
kind on
Earth!

Only \$2
For the
Greatest
Work
Of the
kind on
Earth!

☆ CLARK'S OFFICIAL ☆
Grain Dealers' and Shippers' Gazetteer

WHICH IS NOW READY FOR 1896.

It is handsomely and durably bound in fine silk cloth, with large side stamp, size 9x12 inches, 280 pages, and will be sent, express charges fully prepaid, for **Only \$2.00**

Only \$2
For the
Greatest
Work
of the
kind on
Earth!

Only \$2
For the
Greatest
Work
Of the
kind on
Earth!

This invaluable work has been issued under the endorsement and with co-operation of the Freight Departments of more than one hundred of the leading Railroad Systems throughout the United States. It contains the

OFFICIAL, CORRECTED, REVISED AND COMPARED LISTS

Of Elevators, Flouring Mills, Grain Dealers and Shippers, Track Buyers and Sellers, Commission Houses, etc., etc., on the Following Leading Systems:

Lake Shore & Michigan Southern Railway.
Chicago, Rock Island & Pacific Railway.
Chicago, Milwaukee & St. Paul Railway.
St. Louis, Iron Mountain & Southern Railway Co.

North-Western System:

Chicago & North-Western Railway.
Chicago, St. Paul, Minneapolis & Omaha Line.
Fremont, Elkhorn & Missouri Valley Line.
Sioux City & Pacific Line.

Louisville, New Albany & Chicago Ry. (Monon).
Baltimore & Ohio Railroad Co.
Chicago & Eastern Illinois.
Northern Pacific Railway.
Illinois Central.

Burlington System:

Chicago, Burlington & Quincy Railroad.
Chicago, Burlington & Northern Railroad.
St. Louis, Keokuk & North-Western Railroad.
Chicago, Burlington & Kansas City Railway.
Hannibal & St. Joseph Railroad.
Kansas City, St. Joseph & Council Bluffs Railroad.
Burlington & Missouri River Railroad in Neb.

Cincinnati, Jackson & Mackinaw.
Cincinnati, Hamilton & Dayton Railway Co.
Missouri, Kansas & Texas Railway.

Grand Trunk System:

Chicago & Grand Trunk Railway.
Cincinnati, Saginaw & Mackinaw Railroad.
Michigan Air Line.
Chicago, Detroit & Canada Grand Trunk Junction Ry.
Detroit, Grand Haven & Milwaukee Railway.
Toledo, Saginaw & Muskegon Railway.

Boston & Maine Railway.
Fitchburg Railroad Co.
Maine Central Railway.
New York & New England Railroad Co.
Central Vermont Railroad.
St. Paul & Duluth Railroad Co.
The Baltimore & Ohio Southwestern Railway Co.
New York, Ontario & Western Railway Co.
Chicago & Alton Railway.
Minneapolis, St. Paul & Sault Ste. Marie Ry.
Union Pacific System.
The Great Northern Railway Co.
The Missouri Pacific Railway Co.

Erie System:

New York, Lake Erie & Western Railroad.
New York, Pennsylvania & Ohio Railroad.
Chicago & Erie Railroad.
Buffalo & Southwestern.
Tioga Railroad.

And many other leading railroads not enumerated hereon.

Pennsylvania System:

Pennsylvania Railroad Co.
Pittsburgh, Ft. Wayne & Chicago Railway.
Philadelphia, Wilmington & Baltimore R. R. Co.
Washington Southern Railway Co.
Baltimore & Potomac Railroad Co.
Northern Central Railway Co.
Camden & Atlantic Railroad Co.
West Jersey Railroad Co.

Panhandle Route:

Pittsburg, Cincinnati, Chicago & St. Louis Ry. Co.
Indianapolis & Vincennes Railroad Co.
Cincinnati & Muskingum Valley Railway.

Allegheny Valley Railroad.
Cumberland Valley Railroad.
New York, Philadelphia & Norfolk Railroad Co.

Michigan Central R. R.
C. C. & St. L. Railway (Big Four).
Louisville & Nashville Railroad.
Nashville, Chattanooga & St. Louis Ry.
Chicago & West Michigan Railroad.
Detroit, Lansing & Northern Ry.
Mobile & Ohio Railway.
Peoria, Decatur & Evansville Railroad.
Toledo, Ann Arbor & North Michigan Ry.

The lists for this great work have been collected, arranged and compiled by the above roads and are brought down to date. In the judgment of the leading grain merchants and millers it is the best work of the kind ever published. Besides over 100 of the official railroad lists it contains the Grain Inspection Rules of the leading Boards of Trade, including Minneapolis, Philadelphia, Milwaukee, St. Louis, Detroit, Chicago, Cincinnati, Toledo, etc., etc., the list of officers of the leading Boards of Trade and other information of interest and profit to proprietors of elevators, flour mill owners, grain dealers and shippers, commission houses and track buyers, and concerns who desire to reach this class of customers.

The official lists of the grain dealers, shippers, flouring mills, elevators and commission houses of any one of the twenty-seven of the principal cities is ALONE WORTH MANY TIMES THIS SMALL OUTLAY, and this is the only work which contains these lists, and they are correct and revised to date, besides the thousands and thousands of places all over the country wherever grain is bought or sold.

Remember this great work will be sent immediately on receipt of price, express fully prepaid, provided they have not all been sold, in which case your remittance will be returned immediately.

SEND YOUR ORDER AT ONCE.

MITCHELL BROS. CO.,

184 AND 186 DEARBORN ST., CHICAGO, ILL.

Only \$2
For the
Greatest
Work
Of the
kind on
Earth!

Only \$2
For the
Greatest
Work
of the
kind on
Earth!

JAMES STEWART & CO.,

ENGINEERS AND CONTRACTORS FOR GRAIN ELEVATORS,

RAILROAD WORK AND HEAVY STRUCTURES,
ST. LOUIS AND BUFFALO.

CONSTRUCTION DEPARTMENT—WORK IN 1895.

GRAIN ELEVATORS:

500,000-bushel Elevator, with Marine Leg and Conveyor House 940 feet long, for the New Orleans & Western R. R. Co., Port Chalmette, La.
200,000-bushel Elevator for the Geo. P. Plant Milling Co., St. Louis, Mo.

500,000-bushel Storage Elevator for the Riverside Malt & Elevator Co., Riverside, Cincinnati, O.
150,000-bushel Elevator for the Indiana Distilling Co., Terre Haute, Ind.

RAILROAD BUILDINGS:

Two Freight Warehouses, each 115x625 feet, for the New Orleans & Western R. R. Co., Port Chalmette, La.

Eighty Cotton Warehouses, 62x98 feet, for the New Orleans & Western R. R. Co., Port Chalmette, La.

BUILDINGS:

Cotton Compress Warehouse, 108x310 feet, for the New Orleans & Western R. R. Co., Port Chalmette, La.

Freight Station for the Baltimore & Ohio Southwestern R'y Co., Brighton, Cincinnati, Ohio.

RIVER AND HARBOR:

Dock and Warehouse, 225x1,500 feet for the New Orleans & Western R. R. Co., Port Chalmette, La.

MISCELLANEOUS:

85,000 Spindle Mill, for the Berkshire Cotton Mfg. Co., North Adams, Mass.

15,000 Spindle Mill, for the Home Cotton Mills Co., St. Louis, Mo.

Warehouse for the Bemis Bros. Bag Co., St. Louis, Mo.

10,000-bushel Distillery, the largest in the world, for the Indiana Distilling Co., Terre Haute, Ind.

Two Cotton Warehouses, each 200x250 feet, for the Pelzer Mfg. Co., Pelzer, S. C.

Cattle Barns, capacity 2,500 head, for the Indiana Distilling Co., Terre Haute, Ind.

Foundations for the large Train Shed, for the New York Central & Hudson River R. R. Co., at Syracuse, N. Y.

25,000 Spindle Mill, for the Dwight Mfg. Co., Alabama City, Ala.

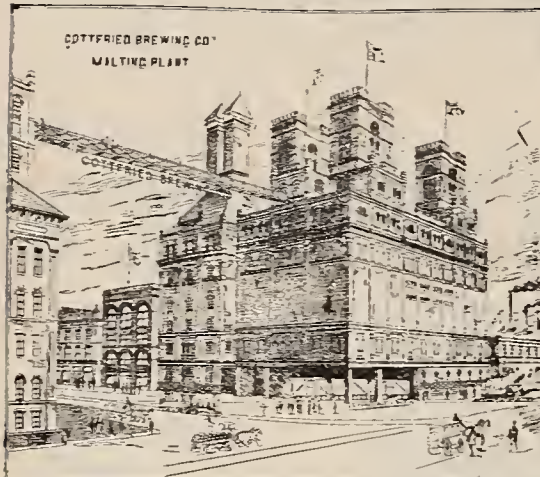
Four-story Bag Factory, for the Gulf Bag Company, New Orleans, La.

Six-story Office Building, for J. W. Warner, Syracuse, N. Y.

Sugar Mill, 120x650 feet, four stories, for the Gramercy Sugar Mill Co., Gramercy, La.

U. S. Bonded Warehouse, 110x250 feet, for the Indiana Distilling Co., Terre Haute, Ind.

Hogan Warehouse Building, Syracuse, N. Y.



WILHELM GRIESSER ENGINEERING COMPANY . .

Designers and Builders of

Elevators, Breweries, Malt Houses,
Distilleries and Machinery.

Patentee and maker of the Grain Dryer "America," Direct Supporting Cellar Construction, Steep-Tank and Mash-Tub Valves.

907-911 Schiller Building, Chicago.

LINK-BELT MACHINERY CO.,

Engineers — Founders — Machinists

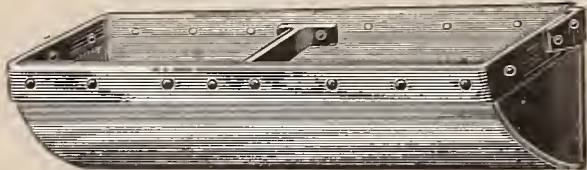
CHICAGO.



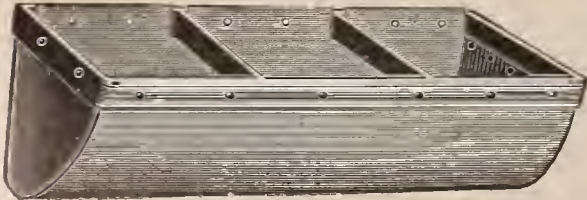
Shafting, Pulleys, Gearing,
Shaft Bearings, Friction Clutches,
Rope Sheaves, Manilla Rope,
Rope Dressing, Grain Trippers,
Grain Shovels, Car Movers,
Wagon Dumps, Elevators and Conveyors, etc.

LINK-BELT ENGINEERING CO., Philadelphia and New York.

"CHICAGO."



"NIAGARA."



MOORE & LORENZ,
43 to 49 S. Canal St.,
CHICAGO, ILL.,

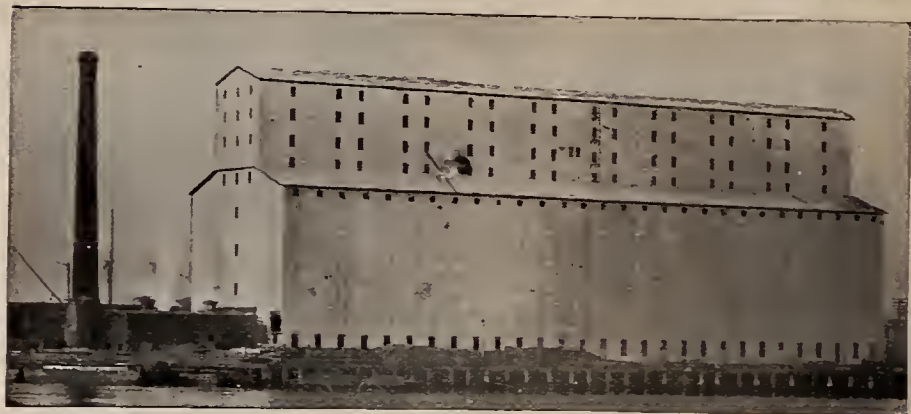
MANUFACTURERS:

ELEVATOR BUCKETS,
BOLTS, ETC.
MILL AND ELEVATOR
SUPPLIES.

D. A. ROBINSON

Main Office: Auditorium Annex, Chicago.

Construction Office: Great Northern Elevator A 2, Minneapolis, Minn.



Designer and Builder of

GRAIN ELEVATORS, MALT HOUSES

And all Kinds of Heavy Construction.

Patent System of Independent
Leg Rope Drive.

Patent Double-Jointed
Distributing Spouts.

Patent Automatic
Grain Belt Tripper

A PERFECT GRAIN DRYER.

Wet or Damaged Grain Restored to Grade.



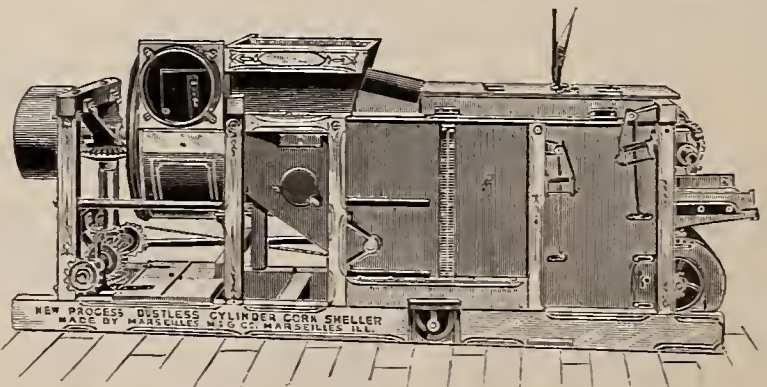
WRITE FOR DESCRIPTIVE CIRCULAR.

JOHN S. METCALF & CO.,

Engineers,
Grain Elevator Builders,

1075 WEST 15TH STREET, - - CHICAGO.

The New Process Warehouse Corn Sheller.



Something New

The
Latest
Improvements

Specially built for
the Elevator and
Grain Trade.

A NEW PROCESS OF SHELLING CORN.

Some of the special features are: An Adjustable Cylinder, White Iron Shelling Parts, Spiral Shelling Head, Double Suction and Blast Fans, Positive Screw Feed, no Clogging, no Grinding of Corn, Cobs Left in Good Shape for Fuel, no Waste of Grain or Power. Address

MARSEILLES MFG. CO., MARSEILLES, ILL.

TROMANHAUSER BROS.,

ARCHITECTS, CONTRACTORS, AND BUILDERS OF

GRAIN ELEVATORS.



COUNTRY,
TRANSFER,
MIXING,
MARINE,
AND
TERMINAL
STORAGE
ELEVATOR
PLANTS.

Plans Submitted and Estimates Furnished.
316 New York Life Building, . . . MINNEAPOLIS, MINN.



WHEN YOU WANT
Elevator or Mill
Supplies,

Cleaning Machines,
Feed Mills,
Corn Shellers,
Engines and Boilers,
Gasoline Engines,
Horse Powers,
WRITE TO

GREAT WESTERN MANUFACTURING CO.

General Office and Factory, LEAVENWORTH, KAN.

Warehouse and Salesrooms, 1221-1223 Union Ave., KANSAS CITY, MO.

SEND FOR OUR ILLUSTRATED CATALOGUE.

The Heidenreich Construction Co.,
ENGINEERS AND GENERAL CONTRACTORS,

Designers and
Builders of

GRAIN ELEVATORS

Of Any Capacity.

MALT HOUSES AND BREWERIES.

541 The Rookery, Chicago, Ill.

THE B. S. CONSTANT COMPANY,

Designer and Builder of

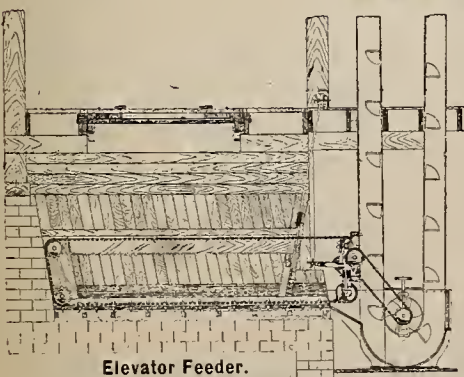
GRAIN ELEVATORS.

MANUFACTURER OF

Grain Cleaning Machinery
FOR ELEVATORS AND MILLS.

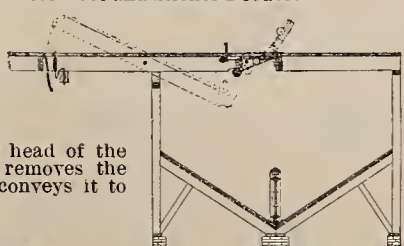
Seed and Farm Fanning Mills.

Automatic Self-Feeding Ear Corn Elevator
Boot and Sheller Feeder.



Elevator Feeder.

Our Elevator Cleaner collects all dust at the head of the elevator before the grain reaches the bins. It also removes the loose silk, shucks and snow out of ear corn and conveys it to the dust room. Correspondence Solicited.



Dump and Rear End of Feeder.

S. W. Cor. Douglas & Prairie Sts., - BLOOMINGTON, ILL.

Macdonald Engineering Company,

CONTRACTING ENGINEERS,

Builders and Designers of

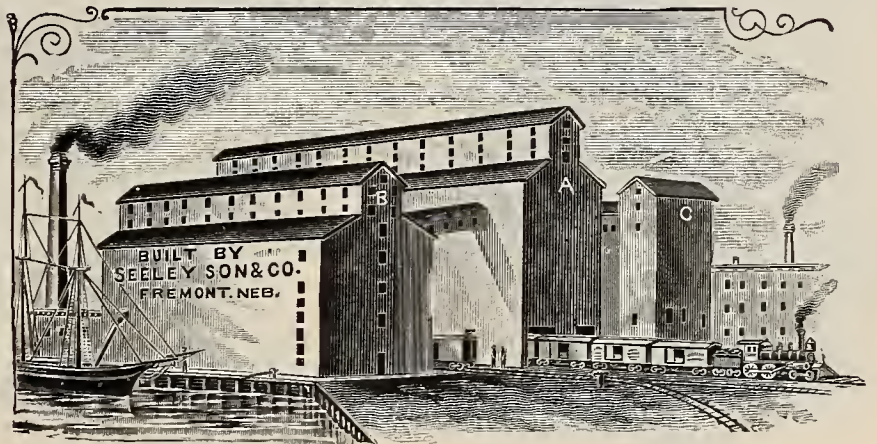
GRAIN ELEVATORS

Any Capacity.

1454, 1455 and 1456 Monadnock Block, Chicago, Ill.

SEELEY, SON & CO.,

Fremont, Neb.

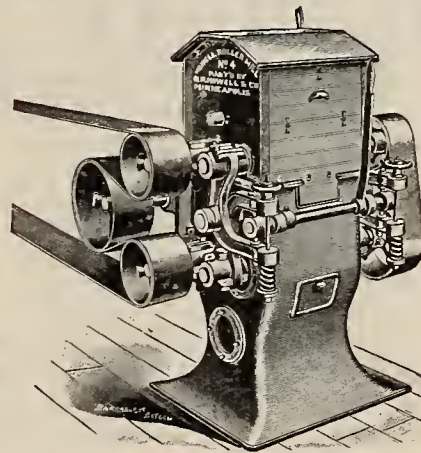


Architects and Builders

OF ALL KINDS OF

GRAIN ELEVATORS.

WE MANUFACTURE EVERYTHING ...

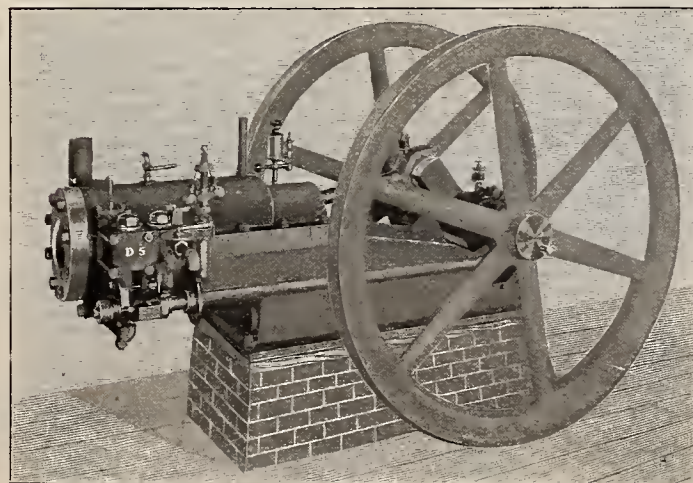


Pertaining to Grain Elevators, including Roller Feed Mills, Power Corn Shellers, Crane Single and Double Gear Elevator Horse Power, the Minneapolis Horse Power, Engines, Boilers, Car Pullers, Power Grain Shovels, Elevator Boots, Grain Spouts, Pulleys, Shafting, Hangers, Boxes, Couplings, Link Chain, etc., etc.

Write for prices direct to the manufacturers,

R. R. HOWELL & CO., Minneapolis, Minn.

"NEW ERA" GASOLINE ENGINE.



Easy to Start.
Easy to Operate.
Vertical Poppet Valves.
Electric or Tube Igniter.
Any working part removed for cleaning or repairing without disturbing other parts.
Heavy and substantial. First class throughout.
Thoroughly Guaranteed.
Sizes 10 to 60 H. P.

For Catalogue and Prices address

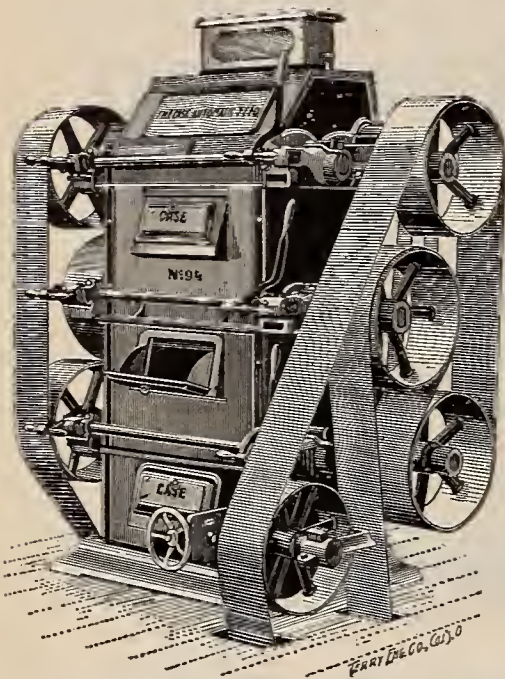
NEW ERA IRON WORKS, 30 WAYNE AVE., DAYTON, OHIO.

Elevator Men,

Who put in a **ROLLER FEED MILL** last season, found it a profitable investment. Some Roller Feed Mills put in by elevator men have more than paid for themselves in one season. The demand for ground feed during the coming season promises to be even greater than during the last.

The Case Three-Pair High Corn and Feed Roller Mills

Are made in four sizes, and always do perfect work.



ONTARIO, IND., April 8, 1895.
The Case Manufacturing Co.,
Columbus, Ohio.

DEAR SIR:—We have the 9x18 Three-High roll running, and it is the best Feed Roll that I ever handled or saw. We can grind 60 to 65 bushels per hour with less than half the power that we used with the old stone.

She is a daisy. We have smiles all over our faces like a full moon. Now, if you want a statement regarding the roll, let me know, and will write you a good one. Everything all O. K.

Yours respectfully,
M. S. MILLER.

We Keep a Full Line of
**ELEVATOR AND MILL SUPPLIES
AND MACHINERY.**

Grain Cleaners, Corn Shellers, Corn Cleaners and Scourers.

CORN MEAL BOLTS.

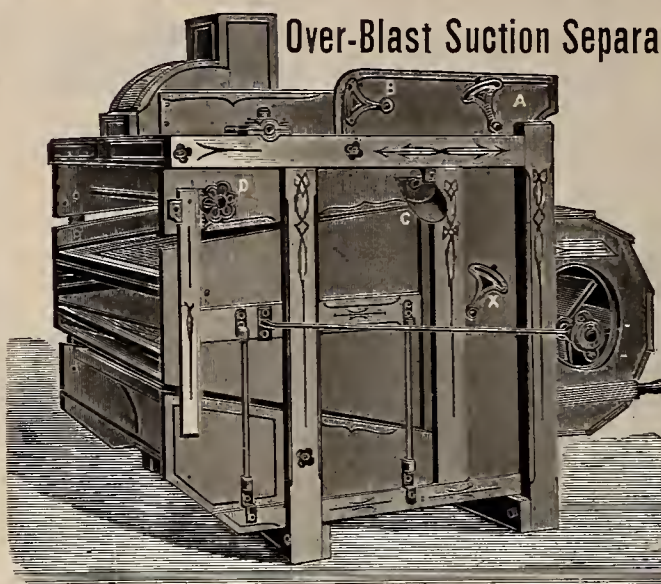
WRITE US FOR PRICES BEFORE BUYING.

THE CASE MFG. CO., COLUMBUS, OHIO.

THE CELEBRATED A. P. DICKEY GIANT GRAIN CLEANERS.

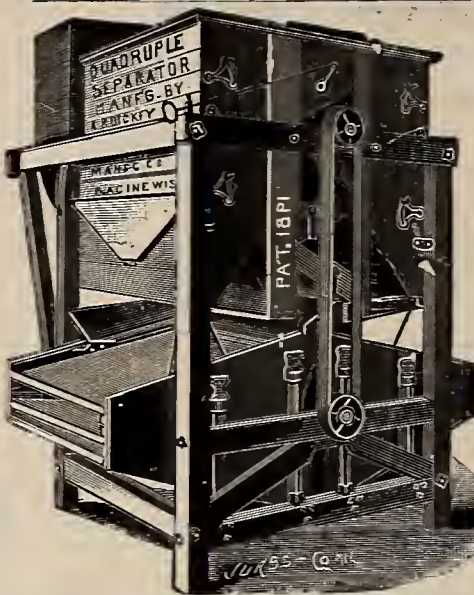
Over-Blast Suction Separator.

THE
STANDARD
IN THEIR
LINE.



"Grain
Cleaned
to a
Standstill."

Manufactured in any desired size and pattern, with capacities to accommodate the largest Elevator and Flouring Mills, or small Warehouses for hand use. Single and Double, End and Side Shake, and Dustless Separators, both Under and Over-Blast.



The Quadruple Suction Dustless Separator, Four separate suctions, independent of each other, with sieves and screens, requiring less power, less floor space, lower in height, needing less bracing, has better and more perfect separations, and furnished with the only perfect force feed and mixer on the market. Guaranteed to clean Grain to any desired standard without waste once through this machine twice as well as any machine made.

For CIRCULARS and PRICES address

A. P. Dickey Mfg. Co.

RACINE, WIS.

THE CONTINENTAL HOTEL

IS THE ONLY FIRST CLASS HOTEL IN THE IMMEDIATE BUSINESS AND AMUSEMENT CENTER OF THE CITY CONDUCTED ON THE

AMERICAN PLAN AT \$2.00 PER DAY
STEAM HEAT, PASSENGER ELEVATOR
AND OTHER MODERN CONVENIENCES.

TABLE AND SERVICE THE BEST

ROOMS NEWLY AND NEATLY FURNISHED. THE NEXT TIME YOU ARE IN CHICAGO TRY
THE CONTINENTAL, YOU WILL FIND IT HOMELIKE AND COMFORTABLE.

CHAS. O. BLOOM

PROPRIETOR



WABASH AVENUE AND MADISON STREET.

CHICAGO, ILL.

THE SMITH PNEUMATIC TRANSFER AND STEEL STORAGE SYSTEM.

*Now in Successful Operation
at Toledo, Ohio.*

This is an entirely new and complete system for handling, treating and storing grain, seeds, millstuff, coal, sand, gravel, salt and other subdivided substances which can be handled in bulk, and the protection and preservation of cereals, seeds, vegetables, fruits, ensilage and fodder crops, cotton, wool and other fibers, tobacco, provisions and all perishable substances and valuable commodities in absolute safety from fire, water, air, storms, floods, microbes, insects, vermin, animals, thieves, evaporation, fermentation, oxidation or other causes of damage or destruction.

This system has nothing in common with other methods, but is entirely different and distinct, in construction, arrangement and operation, materials used, principles involved, and results obtained, from all others heretofore in use.

It is fully protected by 20 patents already issued, and others pending, in the United States and principal foreign countries.

It was on exhibition at the World's Columbian Exposition of 1893, and was awarded four highest medals and diplomas and received in addition thereto the highest indorsement of the principal officers of the Exposition as well as of the highest authorities in all industries to which it is applicable.

The title to all patents and other rights belonging to this system is vested in The Smith Pneumatic Transfer & Storage Co., and any infringement thereon will receive prompt attention.

The policy of the Company in regard to the introduction of its system is to make such liberal and easy terms with all who desire to use it that there will be no cause for complaint.

Full particulars furnished on application in person or by letter to

The Smith Pneumatic Transfer & Storage Co.,

1327 Manhattan Building,

315 DEARBORN ST., CHICAGO.

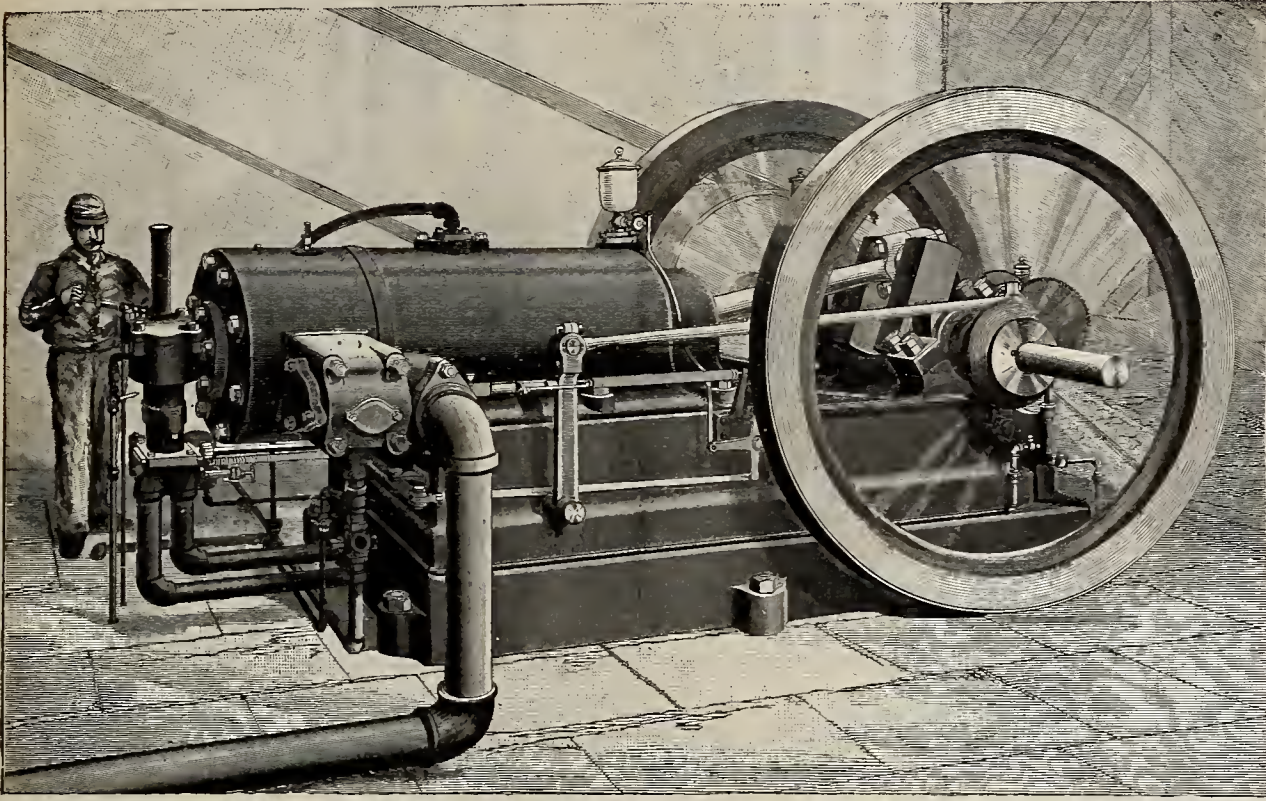
SEEDS

THE ALBERT DICKINSON CO

Timothy, Clovers, Flax, Hungarian, Millets, Red Top, Blue Grass,
Lawn Grass, Orchard Grass, Bird Seeds, Ensilage Corn,
Pop Corn, Buckwheat, Field Peas, etc.

OFFICES, COR. CLARK & SIXTEENTH STS., CHICAGO, ILL

30 ACTUAL HORSE-POWER CALDWELL-CHARTER GASOLINE ENGINE. . . .



WE have in stock a 30 h.-p. Caldwell-Charter Gasoline Engine with self-starting device, which is in first-class condition, which we will be glad to sell at an especially low price, as we are in need of the room it occupies and do not usually carry this size in stock. This engine is of the very best design, and the material and workmanship are first-class in every particular. It is a heavy machine, running at a slow speed compared with other gasoline engines, and will prove a very durable and substantial engine. To anyone having need of an engine of this size we shall be pleased to name a low price for immediate acceptance.

H. W. CALDWELL & SON CO.,

Manufacturers of Caldwell Conveyor, Grain Elevator
Supplies and General Machinery,

**127-133 West Washington Street,
CHICAGO, ILL.**

CUT OUT, FILL IN AND MAIL TO SECRETARY W. H. CHAMBERS, HEPBURN, IOWA.
(SEE OTHER SIDE.)

APPLICATION FOR MEMBERSHIP.

W. H. CHAMBERS,

Secretary of the Grain Dealers' National Association,

HEPBURN, IOWA

189

SIR:—

hereby make application for Membership in THE GRAIN DEALERS' NATIONAL ASSOCIATION OF THE UNITED STATES, in accordance with the rules and regulations governing the Association, and to which I have subscribed on the back of this Application, and enclose herewith the membership fee of \$10.00.

Firm Name

City or Town

County

State

Number of Elevators

Located

At

At

At

At

At

At

At

At

THE "OTTO" GASOLINE ENGINE, SIMPLEST CHEAPEST BEST POWER FOR . . . Grain Elevators, Flour and Feed Mills, Water Works, Electric Light Stations.

The Otto Gas Engine Works,
33d & Walnut Sts., PHILADELPHIA, PA.

OFFICES: { 245 Lake Street, CHICAGO.
321 S. 15th Street, OMAHA.
212 Nicollet Avenue, MINNEAPOLIS.
35 E. Ohio Street, INDIANAPOLIS.

CUT OUT, SIGN AND MAIL TO SECRETARY W. H. CHAMBERS, HEPBURN, IOWA.

(SEE OTHER SIDE.)

CONSTITUTION AND BY-LAWS OF THE GRAIN DEALERS' NATIONAL ASSOCIATION.

Adopted at Chicago, November 9, 1896.

CONSTITUTION AND BY-LAWS.

PREAMBLE.

We, the undersigned, being regularly engaged in the buying and selling of grain, and recognizing the necessity of a National Association of Grain Dealers, do hereby associate ourselves in an organization, the object of which shall be the advancement and protection of the common interests of those who are regularly engaged in the grain business, the formulating of rules to govern the transaction of business and the promotion of friendly relations among legitimate grain men of the country.

CONSTITUTION.

ARTICLE I.—NAME.

Section 1. The name of this organization shall be The Grain Dealers' National Association.

ARTICLE II.—MEMBERSHIP.

Section 1. Any person, firm or corporation operating a grain elevator and engaging in the buying and selling of grain continuously, may become a member of this Association; also, any person, firm or corporation who has been engaged in the buying and selling of grain continuously at one station for at least 2 years, yet has no elevator, may, upon the recommendation of two persons or firms who are members of this Association in good standing, and are operating grain elevators at the same or nearby stations, be admitted to membership.

Sec. 2. Regular grain receivers and regular track buyers, who do not sell grain for, or send bids to, or buy grain from grain scalpers, irregular grain dealers, transient buyers or "scoop-shovel men," may be admitted to honorary membership upon the payment of the regular membership fees.

Sec. 3. No person, firm or corporation shall be admitted to membership in this Association unless he or it shall receive the full vote of the Board of Directors, and shall subscribe to this constitution and by-laws.

ARTICLE III.—OFFICERS.

Section 1. The officers of this Association shall consist of president, first vice-president, second vice-president, a treasurer and a secretary, and a board of directors consisting of the president, the secretary and five members of the Association.

Sec. 2. In case a vacancy occurs in the Board of Directors between meetings, the President shall appoint a successor for the balance of the term of office.

ARTICLE IV.—DUTIES OF OFFICERS.

Section 1. It shall be the duty of the President to preside at all meetings of the Association, and at all meetings of the Board of Directors, and to sign all orders drawn on the Treasurer by the Secretary.

Sec. 2. In the absence of the President, the First Vice-President shall preside at all meetings of the Association.

and in the absence of both, the Second Vice-President shall preside.

Sec. 3. It shall be the duty of the Secretary to record and preserve all minutes of meetings of the Association, conduct correspondence and issue notices of meetings to each member. He shall make a report at each annual meeting, keep members posted on what is being done between meetings, and perform such other duties as may be required by the Board of Directors.

Sec. 4. It shall be the duty of the Treasurer to collect all fees and dues, have charge of all moneys of the Association, and pay out money only upon orders signed by the President and Secretary. He shall report the state of the finances at each regular meeting of the Association.

ARTICLE V.—FEES AND DUES.

Section 1. The membership fee of the Association shall be \$10, which shall accompany each application for membership.

Sec. 2. The annual dues shall be \$5, more or less, according as the Association shall decide at the annual meeting, payable on the first of each year. Members who have more than one house shall pay in addition to the annual dues, an annual fee of \$1 each for first 10 houses; a fee of seventy-five cents for each house in excess of 10 and not over 30, and a fee of fifty cents each for each house in excess of 30.

ARTICLE VI.—AMENDMENTS.

Section 1. This constitution may be amended at any annual meeting of the Association, by an affirmative vote of two-thirds of the members present. Notices of proposed amendments must be mailed to each member at least thirty days prior to the annual meeting.

BY-LAWS.

ARTICLE I.—MEETINGS.

Section 1. There shall be annual meetings of this Association, subject to the call of the Board of Directors.

Sec. 2. A quorum shall consist of 50 members, who shall be represented by person or proxy.

Sec. 3. The Board of Directors shall meet quarterly, at such time and place as they may decide upon.

ARTICLE II.—ELECTION OF OFFICERS.

Section 1. Officers shall be elected, by ballot, at each annual meeting, and hold their offices for one year, or until their successors are duly elected and have qualified.

ARTICLE III.—EXPENSES OF OFFICERS.

Section 1. The traveling and hotel expenses of all officers at regular and special meetings shall be paid by the Association.

Sec. 2. The Secretary shall receive a salary of \$1,000 per year.

Sec. 3. The Treasurer shall give bonds in the sum of \$5,000.

ARTICLE IV.—APPLICATIONS FOR MEMBERSHIP.

Section 1. Applications for membership accompanied by the membership fee shall be made to the Secretary and turned over to the Board of Directors. Each applicant must be recommended by two members in good standing, and the applicant shall become a member upon receiving the unanimous vote of the Board of Directors, and subscribing to the Constitution and By-laws. If the applicant is not elected a member, his membership fee shall be returned to him.

ARTICLE V.—STANDING COMMITTEES.

Section 1. The Board of Directors shall act as an executive committee.

Sec. 2. There shall be a standing Committee on Transportation consisting of five members, appointed by the President at each annual meeting.

Sec. 3. The Secretary or complaining member shall refer to the Board of Directors all matters needing adjustment, such as discrimination in freight rates, shortages, dishonest returns, or other grievance between any member and railroad, consignee, or others.

Sec. 4. The Board of Directors shall make a thorough investigation of all complaints, attempt to secure settlement of same and report every case to the Association.

ARTICLE VI.—DUTIES OF MEMBERS.

Section 1. The name of any member of this Association who has not paid his annual dues shall, after due notice, be stricken from the roll of membership.

Sec. 2. It shall be the duty of members to aid in protecting the interests of every member of the Association.

Sec. 3. Members of this Association shall not buy grain at any stations where they are not regularly doing business and where there is a regular buyer who is a member of this Association without the consent of such buyer.

Sec. 4. So far as lies in their power, members of this Association shall not transact business with irregular dealers; with parties against whom unfairness is proved; with receivers who patronize irregular dealers, or with those who solicit grain from farmers or irregular dealers.

Sec. 5. It shall be the duty of every member of this Association who learns of any commission firm, receiver or track buyer soliciting or encouraging shipments from farmers or irregular dealers, to report the name of said commission firm or receiver, together with the facts in the case, to the Secretary, who shall record the same in a book kept for that purpose, and be shall immediately notify each member of this Association.

ARTICLE VII.—AMENDMENTS.

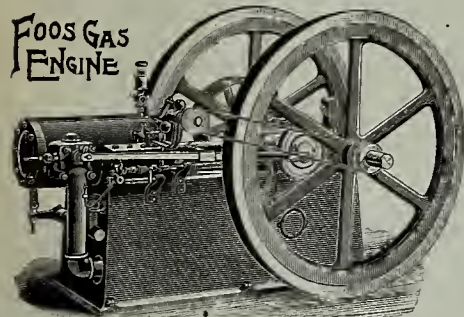
Section 1. These by-laws may be amended by a majority vote of those present at a regular meeting. Formal notices of proposed amendments must be mailed to members at least thirty days prior to the meeting.

We hereby subscribe to the foregoing constitution and by-laws and agree to give the association our hearty support.

Recommended by

Address

THE NEW FOOS GAS and GASOLINE ENGINE.



We can furnish Engines from 2 to 100 horse power, that are reliable and economical. Cost of operating Gasoline Engines, one cent per horse power per hour.

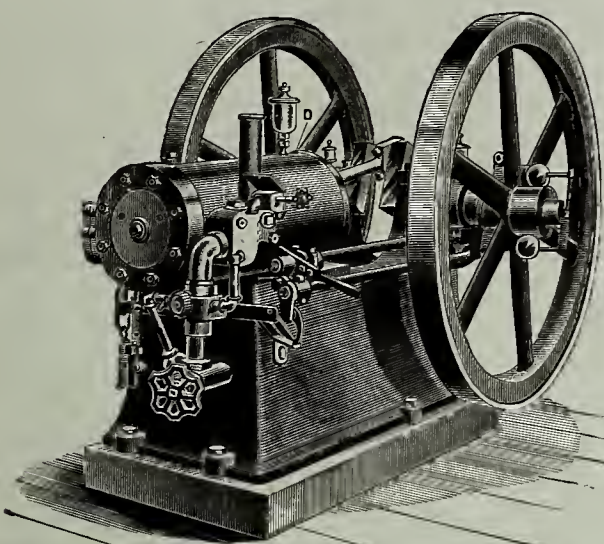
We furnish free with every engine an Electric Battery to explode the gas, that will last four months without any attention, then it can be renewed and will last four months more and so on for all time.

We do not use a red hot tube to explode the gas, that has to be replaced with a new one almost daily.

FOOS GAS ENGINE CO., Springfield, Ohio.

THE LATEST WEBSTER HORIZONTAL ENGINE

GAS CASOLINE

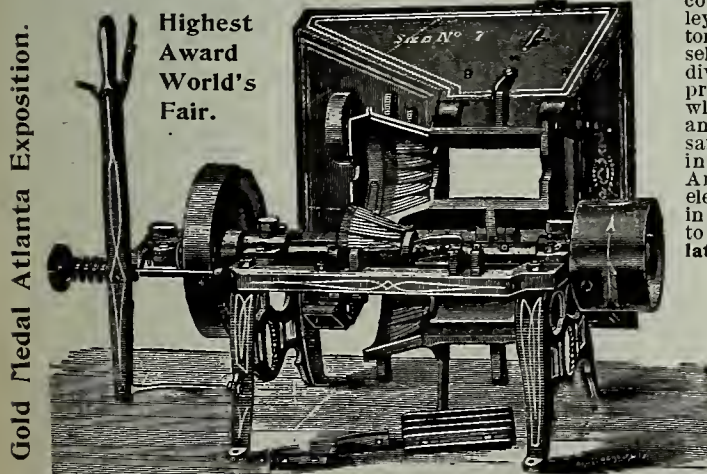


WEBSTER MANUFACTURING COMPANY,
SOLE MAKERS,
1077 WEST 15TH ST., CHICAGO.

Write for handsome new catalogue.

THE BEST ALL-AROUND FEED MILL

The conical burrs give large capacity with moderate power. Ahead of rolls or burrs in speed and quality of work for grinding all kinds of grain into first-class feed. Will crush corn and cob and grind oats, rye, barley, wheat, shelled corn, cottonseed, oil cake, etc. Has self-feeder for ear corn. The divided hopper makes it practical to grind oats, wheat or other small grain and crush ear corn at the same time, mixing the two in any proportion desired. Are sold with or without elevator attachment. Made in six sizes, ranging from 2 to 25 horse power. Get my latest circular.

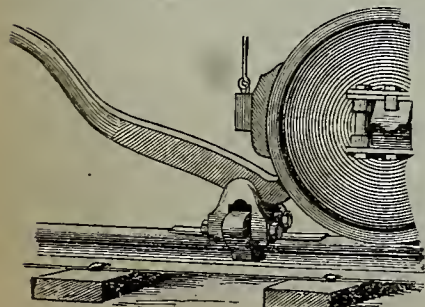


Gold Medal Atlanta Exposition.

YES, I still make
"Ready Dressed"
MILL COGS
and Bowsher's Speed
or Motion Indi-
cator and
Superior Hard Maple
Conveyor Flights.

N. P. BOWSHER, SOUTH BEND, IND.

JACOBUS IMPROVED CAR MOVER



Combines Simplicity, Cheapness and Efficiency, and excels all others.

It has a sure grip on the rail,
It will not cut the face of the rail.
It does not slip on frosty or oily rails.

The harder the pressure on the lever, the less tendency it has to slip either backward or sidewise.
Made of the very best material, of tested strength. Every shipper should use it.

Price \$10, F. O. B. cars Millstadt, Ill.
Address

P. H. JACOBUS, Millstadt, Ill.

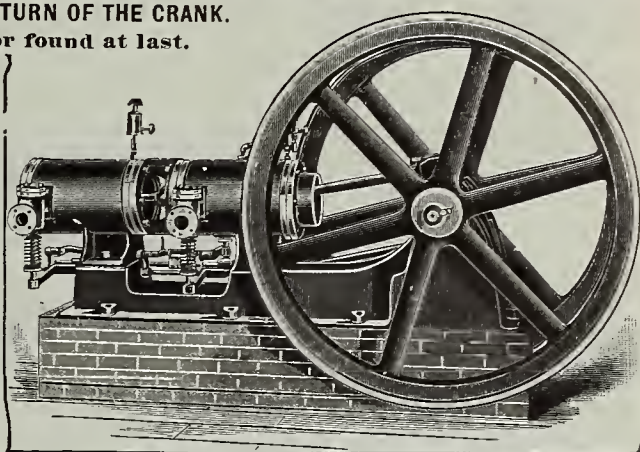
The Hicks Improved GAS AND GASOLINE ENGINE.

AN IMPULSE WITH EVERY TURN OF THE CRANK.

The long-sought for found at last.

Is the engine of the future, as by its construction it gets double the power from same weight and same number of parts used in the ordinary gas engine, enabling the manufacturers to reduce the price to compete with steam engines, at the same time furnishing an engine as much better than the ordinary single cylinder one-impulse-to-two-turns-of-the-crank engines now on the market, as the Corliss Steam Engine of to-day is better than the steam engine of thirty years ago.

FRONTIER IRON WORKS,
Sole Manufacturers for
Detroit Gas Engine Co.,
DETROIT, MICH.



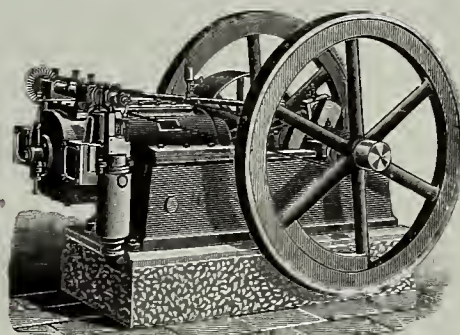
GAS AND GASOLINE ENGINES

1 to 40 Horse Power.

Natural Gas,
Coal Gas,
Gasoline Direct from Tank.

The Springfield Gas Engine Co.

25 W. Washington St., Springfield, O.



DUST! DUST!



Gibbs' Patent Dust Protector protects the nose and mouth from inhalations of poisonous dust; invaluable in mills, elevators and every industry where dust is troublesome. Perfect protection with perfect ventilation. Nickel-plated protectors \$1, postpaid. Circulars free. Agents wanted.

Gibbs Respirator Co.,
30-36 La Salle Street, - CHICAGO.



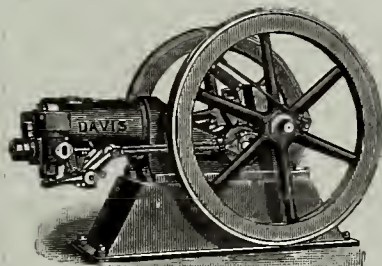
Dust Protector.

The "Perfection" is designed specially to keep poisonous dust out of the lungs; is thoroughly reliable, and the handiest and best appearing. Nickel plated protector, postpaid, \$1. Agents wanted. Address

H. S. COVER, So. Bend, Ind.

DAVIS GASOLINE ENGINE

GET OUR PRICES.



Simplest Engine Built.

to anyone needing a gasoline engine. I also consider it cheaper and safer than steam, being much handier and always ready for use.

Pronounced by experts the most scientific in principle. Hundreds of testimonials. Easily operated by any unskilled person; a steady, even power; gasoline direct from the tank.

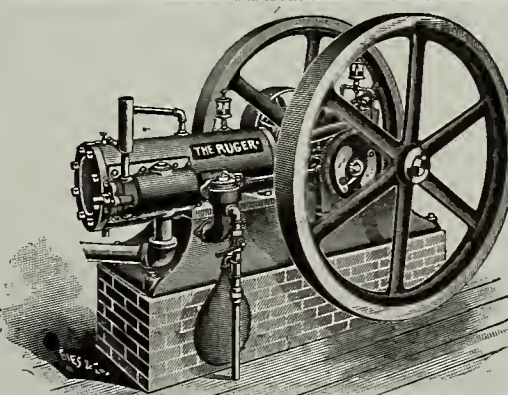
HARTLEY, IOWA, Feb. 10, 1896.

TO WHOM IT MAY CONCERN:

This is to certify that I have bought one of the 10-horse Davis Gasoline Engines, manufactured at Waterloo, Ia., and I most cheerfully state that I consider it the best gasoline engine I ever saw, being easily started, and it develops the full power rated at. I wore out a gasoline engine, and therefore know something about gas engines, and I would not give one of these engines for two of any make I know. I cheerfully recommend it to anyone needing a gasoline engine. I also consider it cheaper and safer than steam, being much handier and always ready for use.

Yours respectfully, I. N. DRAKE.

DAVIS GASOLINE ENGINE CO., - Waterloo, Iowa.



Gas and Gasoline Engines

FROM 1 H. P. UPWARD.

A High Grade engine in every respect.

Sent to any responsible party subject to approval after trial. Four Years of unprecedented success. There is no engine made that will give the wear and regularity with the economy of fuel that this engine will. Send for catalogue explaining it, to

J. W. Ruger & Co., Cor. Perry & Chicago Sts.,
BUFFALO, N. Y.

BRANCH OFFICES:

H. S. WALKER, 1332 Monadnock Building,
CHICAGO, ILL.

RUGGLES-COLES ENGINEERING CO.,
39 and 41 Cortlandt St., NEW YORK, N. Y.

R. K. GILBERT, RICHMOND, VA.

NEVER A PEER



The Salem Bucket has had imitators, but most ever claimed by competing buckets is that they "are as good as the Salem."

We fixed the standard to which others aspired, but the Salem is now, as it always has been, incomparably the

BEST BUCKET MADE.

The BEST is what you want. It is the cheapest and most satisfactory in the end. Besides, the Salem is sold as low as other buckets.

ALL KINDS OF SHEET AND PLATE METAL WORK.

THE W. J. CLARK CO., Salem, Ohio, U. S. A.



ELEVATING AND CONVEYING APPLIANCES.



Webster Spiral Conveyor,
Elevator Buckets,
Elevator Boots,
Belt Conveyors,
Friction Clutches.



Power Grain Shovels,
Car Loading Spouts,
Rope Drives,
Gas Engines,
Chain Belting.



WEBSTER MFG. CO.

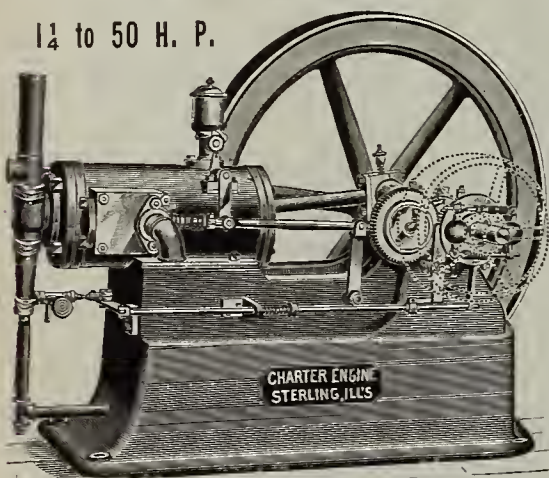
OFFICE AND WORKS: 1075-1097 WEST 15th ST., CHICAGO.



STERLING, ILL., - 400 Locust Street,

Is where you must address for printed matter and information regarding **THE MOTOR OF THE 19th CENTURY.** Used any place, by anyone, for any purpose.

14 to 50 H. P.



Economy, Reliability, Simplicity, Safety.

Corn Sheller, Drag Belt and Elevator.
Engine was Set Up and Started by Printed Directions.

JACKSONVILLE, Ill., July 7, 1896.

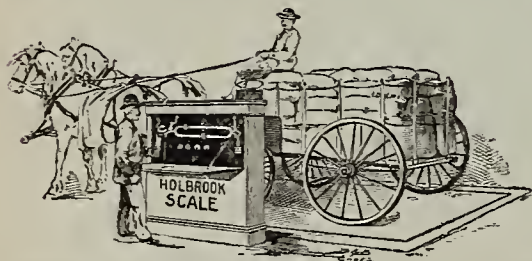
GENTS:—We have had one of your No. 5 Engines in use at Woodson since July, 1891, using gasoline for fuel, and use a less amount than claimed by you. We run a No. 3 Western Corn Sheller and Cleaner, 8-inch Ear Corn Drag Belt about 130 feet long to carry corn to sheller, and elevate about 50 feet with 5x12 cups. Your engine requires very little attention, and is satisfactory in every respect. Would not think of using steam in country elevator. Insurance is fully 1 per cent less than when steam is used. Yours truly,

GREENLEAF & CO.

MANY IMITATIONS. ONLY ONE ORIGINAL.

CHARTER GAS ENGINE COMPANY.

WAGON, HOPPER, PORTABLE AND DUMP SCALES.



Elevator Machinery of Every Description.

WESTERN AGENTS FOR THE

Charter Gasoline Engines.

Write for prices. Address

C. D. Holbrook & Co.,
305 3d St. So., Minneapolis, Minn.

CRUSHED OYSTER SHELLS FOR POULTRY,

BONE MEAL, GRANULATED BONE, GROUND BEEF SCRAPS, CALCITE AND FLINT.

Send for Wholesale Price List and Samples. Special low prices on carload orders.

YORK CHEMICAL WORKS, = YORK, PA.

WITH WHICH THIS PUBLICATION IS PRINTED
IS MADE BY THE
THE INK QUEEN CITY PRINTING INK CO.
SOUTH ST. CINCINNATI, O.



WELLER CONVEYOR.

Elevator Buckets,
Elevator Boots,
Power Grain Shovels,
Trippers,
Car Pullers,
Loading Spouts,
Belting, Etc., Etc.



Pulleys,
Rope Sheaves,
Shafting,
Hangers,
Clutches,
Sprocket Wheels,
Link Belting, Etc., Etc.

WRITE FOR GENERAL CATALOGUE NO. 12.

Estimates given on Complete Grain Elevator Equipments.

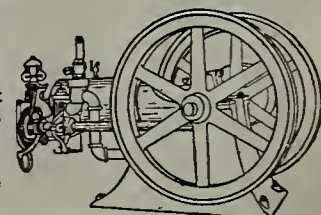
WELLER MFG. CO. Office: 118 and 120 North Avenue, Chicago.



LAMBERT GAS and ENGINES

GASOLINE 2 to 100 H.-P.
If you want the Best Buy the Lambert. It's the Cheapest Because the Best. It's the Best Because most Reliable, Durable, Economical, and Efficient and is not an experiment.

The Lambert Gas & Gasoline Engine Co.,
Anderson, Ind.



MANUFACTURERS OF ALL KINDS OF BAGS

GRAIN BAGS

AND BAGS FOR MILLERS USE A SPECIALTY.
MILWAUKEE BAG CO. MILWAUKEE, WISCONSIN.

ESTABLISHED 1802.

Wm. B. Scaife & Sons,

Offices: 119 First Avenue, PITTSBURG, PA.

Engineers, Manufacturers and Builders of

STEEL FRAME BUILDINGS,

IN ALL PARTS OF THE U. S.

Steel Tanks, Stacks, Etc.



For Covering Barns, Elevators and all other Structures.

Send for Catalogues.

Made in Four Sizes

Ranging in Capacity from

10 TO 75 BU. PER HOUR.

We also make Crushers and Shellers.

C.O. Bartlett & Co.

CLEVELAND, OHIO.

